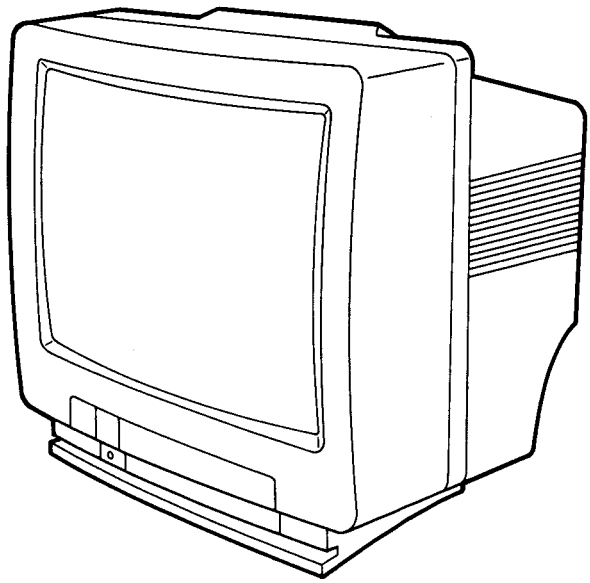
MITSUBISHI

Service Manual

COLOUR TÉLÉVISION



MODÉLE

CT-21M2FM
CT-25M2FM

MITSUBISHI ELECTRIC CORPORATION

CARACTERISTIQUES

Système de réception	: CCIR (L, B/G)
Système de couleur	: PAL, 60 PAL, SECAM
Canaux	
VHF	: 45~82, 115~305 MHz
UHF	: 470~862 MHz
Tension secteur	: 220V AC 50 Hz
Consommation	:
Entrée antenne	: 75 Ohms
Fréquence intermédiaire	: Vidéo 38.9, 34.47 MHz Son 33.4, 32.4, 40.97 MHz
Sortie audio	: 3W + 3W
Haut-parleurs	: ronds 120mm x2
Chassis	: AL4
Tube cathodique	: A51EBV13X01 90° (modèle 21") A59EAK71X11 110° (modèle 25")
Dimensions du coffret	: mm 497 x 447.5 x 486 (L x H x P) (modèle 21") mm 572 x 504 x 447.5 (L x H x P) (modèle 25")
Poids approximatif	: 21.2 KG (modèle 21") 25.3 KG (modèle 25")

PRECAUTIONS DE SECURITE

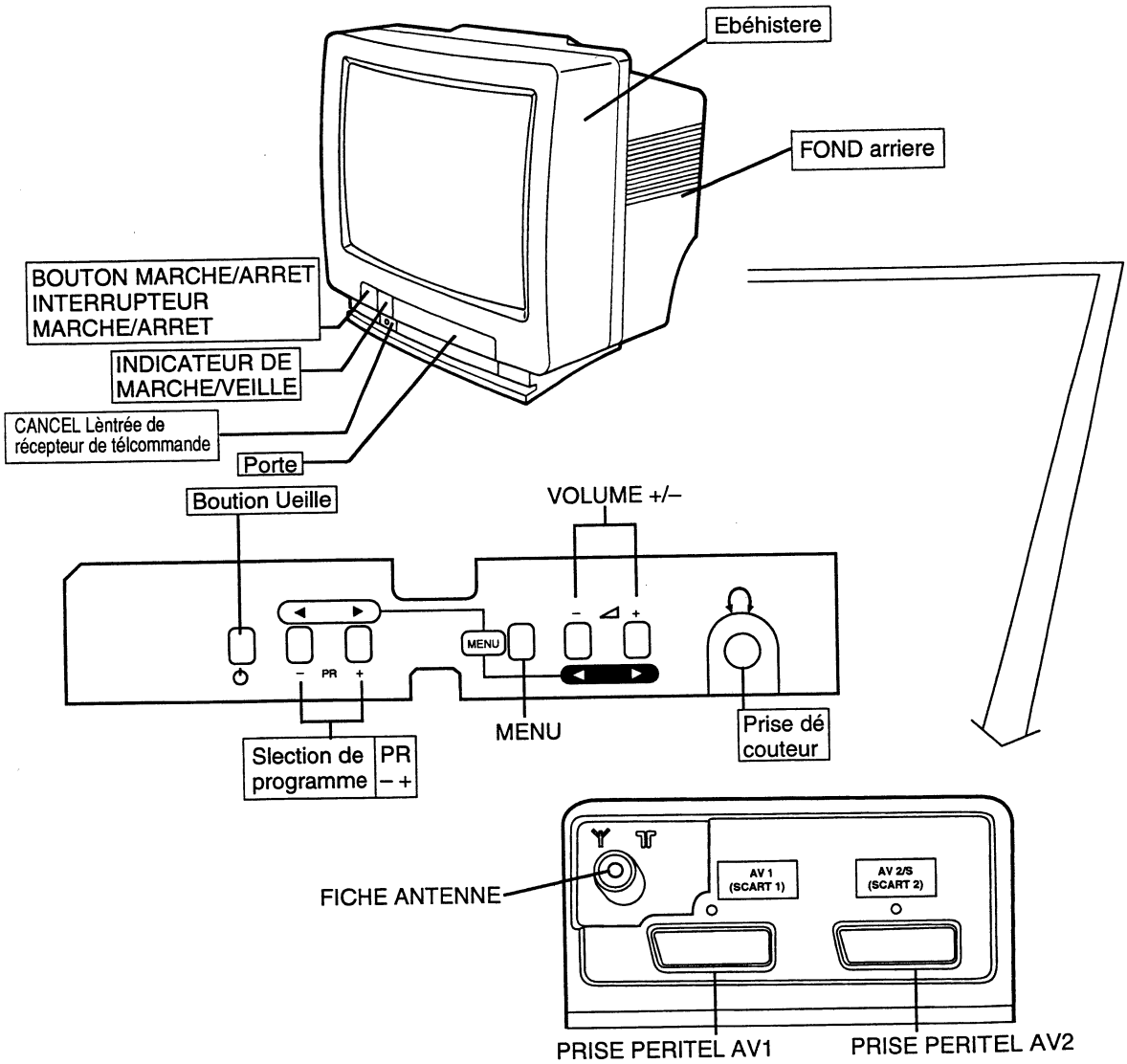
NOTE : Observer les recommandations de sécurité se trouvant sur le chassis et sur le fond de l'appareil.

AVERTISSEMENT:

1. Un transformateur d'isolement devra être installé entre le téléviseur et la prise secteur avant tout réglage sur le chassis chaud du téléviseur.
2. La mise sous tension d'un poste à chassis ouvert implique la présence de très hautes tensions dans le poste. En conséquence, seules des personnes suffisamment familiarisées avec les précautions d'usage peuvent entreprendre un travail sur l'appareil.
3. Ne pas installer, démonter ou manipuler un tube cathodique sans porter des lunettes de protection. Pendant la manipulation, tenir le tube éloigné du corps et ne pas laisser approcher le personnel ne portant pas de lunettes de protection.
4. Si une intervention est requise, observer le câblage d'origine et tout particulièrement dans la partie très haute tension de l'appareil. Si un courtcircuit est détecté, remplacer les composants montrant des signes évidents d'échauffement.

CONTROLE STATIQUE DE COURANT DE FUITE

Il est recommandé d'effectuer le contrôle de courant de fuite suivant la méthode ci-dessous avant de retourner l'appareil à l'utilisateur.
Deconnecter le cordon d'alimentation de la prise secteur et court-circuiter les deux bornes de la prise.
Mettre l'interrupteur secteur en position Marche et brancher un ohmmètre entre l'une des bornes court-circuitées du cordon secteur et une quelconque partie métallique extérieure du téléviseur (prise d'antenne, poignée métallique, etc...).
Les parties métalliques accessibles ayant un chemin de retour au chassis doivent avoir une résistance minimale de 4 még ohms.
Une mesure en dessous de cette valeur indique une anomalie qui exige une intervention corrective.



BROCHAGE DE PRISE PERITEL

PIN	AV1	AV2	PIN	AV1	AV2
1	SORTIE AUDIO VOIE DROITE		12	NON UTILISE	
2	ENTRÉE AUDIO VOIE DROITE		13	MASSE ROUGE	NON UTILISE
3	SORTIE AUDIO VOIE GAUCHE		14	MASSE SUPPRESSION	NON UTILISE
4	MASSE AUDIO COMMUNE		15	ENTRÉE COMPOSANTE ROUGE	CHROMA IN
5	MASSE BLEU	NON UTILISE			
6	ENTRÉE AUDIO GAUCHE		16	ENTRÉE SUPPRESSION	ENTRÉE CHROMA
7	ENTRÉE COMPOSANTE BLUE	NON UTILISE	17	MASSE VIDEO (SORTIE)	
8	COMMUTATION LENTE		18	MASSE VIDEO (ENTRÉE)	
9	MASSE VERT	NON UTILISE	19	SORTIE VIDEO	
10	NON UTILISE		20	ENTRÉE VIDEO	ENTRÉE VIDEO OU ENTRÉE LUMINANCE
11	ENTRÉE COMPOSANT VERT	NON UTILISE	21	MASSE COMMUTE (BLINDAGE)	

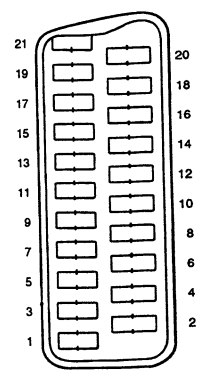


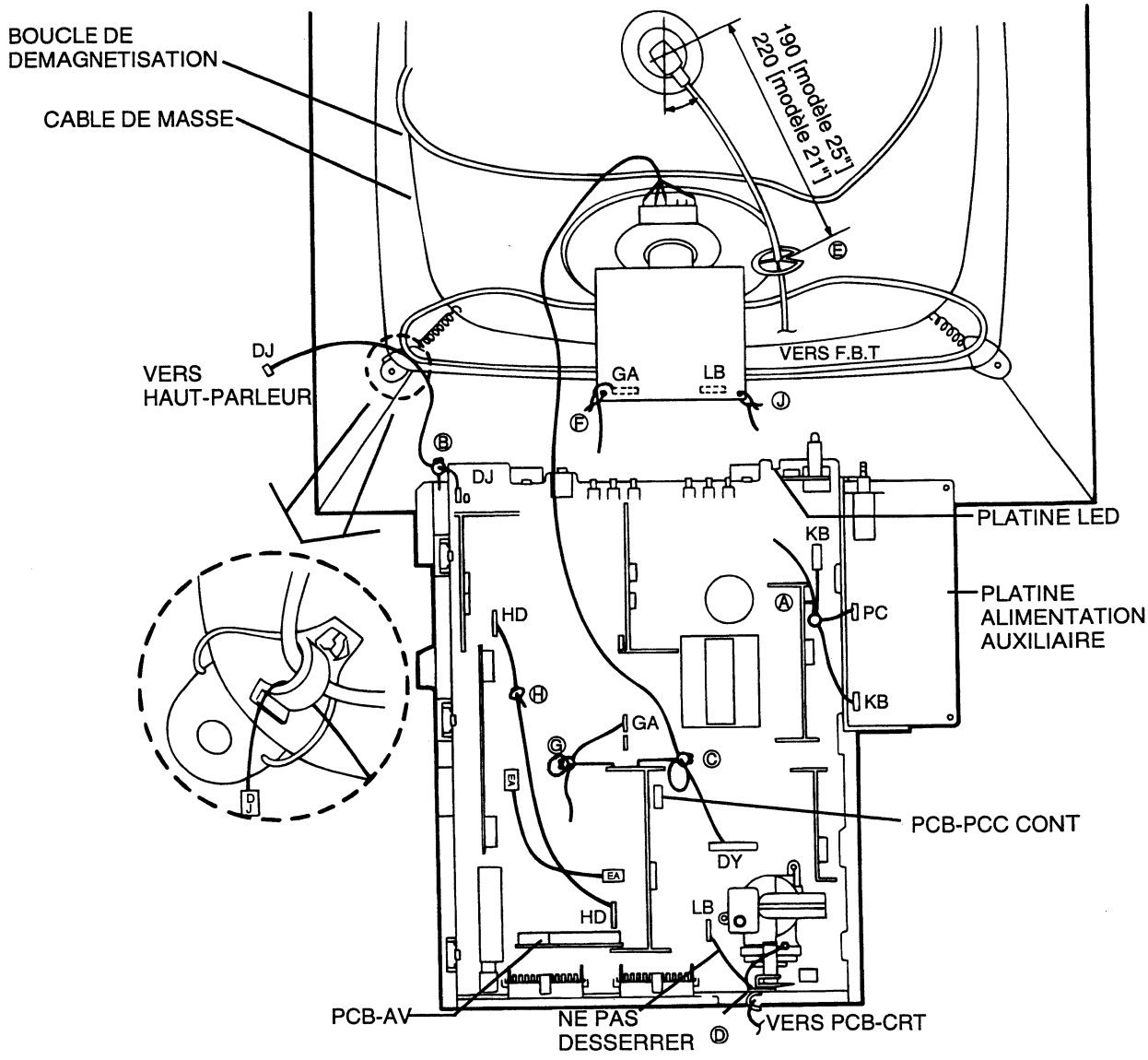
Fig. 1 CONTROLE ET HABILLAGE

CHEMIN DE CABLAGE

LES CABLES DOIVENT ETRE POSITIONNES COMME INDIQUES SUR LA TABLE CI-DESSOUS

NOTE: LES CABLES INTERIEURS SONT FIXES OU POSITIONNES DE FACON A NE PAS SUBIR LE RAYONNEMENT EMIS PAR LE TRANSFORMATEUR HAUTE TENSION. APRES TOUTE INTERVENTION LES CABLES DOIVENT ETRE REMIS DANS LEUR POSITION INITIALE.

SI UNE INITERVENTION DOIT ETRE REALISEE SUR L'ANODE DE LA THT, IL EST NECESSAIRE DE RESPECTER L'ANGLE LORS DE LA REMISE EN ETAT.



REPERE	CONNEXIONS A FIXER	REPERE	CONNEXIONS A FIXER
A	KB, PC	F	SA (2 SERRE CABLES), GA
B	DJ	G	GA
C	DY	H	HD
D	LB, CABLE FOCUS, CABLE G2	J	LB,CABLE FOCUS, CABLE G2
E	CABLE ANODE		

DEMONTAGE DU FOND ARRIERE

1. Dévisser les 6 vis du fond arrière pour le modèle 21" ou les 6 vis pour le modèle 25" (voir Fig.2).
2. Défaire les 2 crochets ⓐ et ⓑ sur le dessus du fond arrière et les ôter (voir Fig.2).

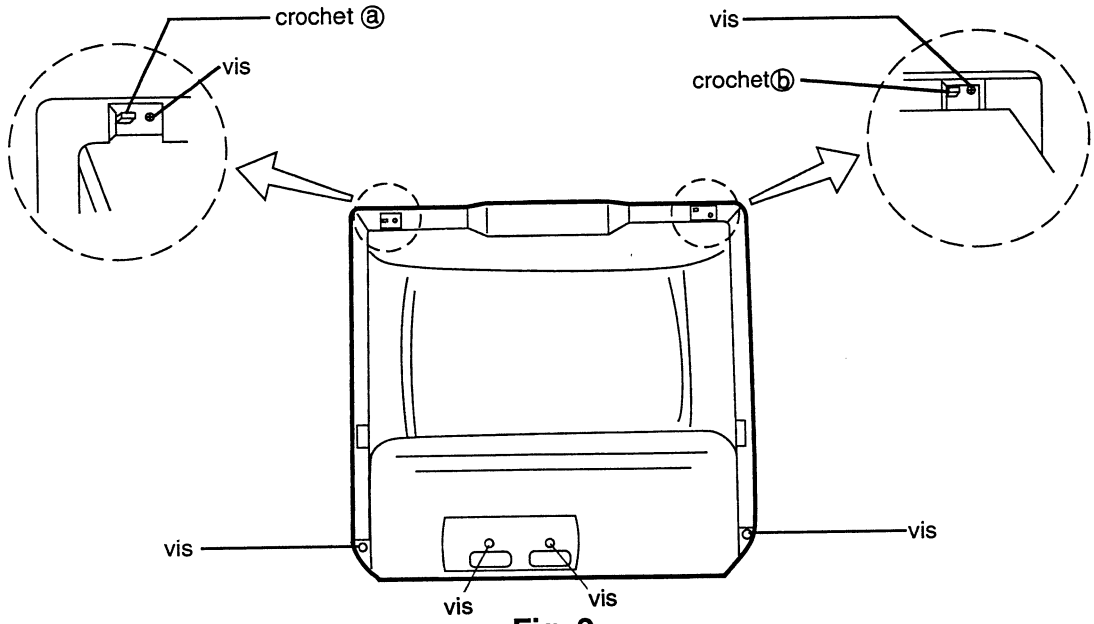


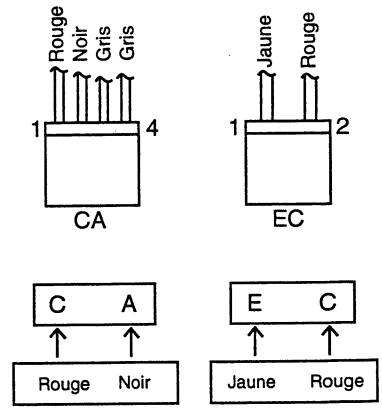
Fig. 2

Correspondance connecteurs / code des couleurs

Les connecteurs sont repérés par un code couleur suivant le tableau de correspondance ci-dessous.
Seuls les câbles broches 1 et 2 permettent d'identifier le connecteur.

Couleur	Code
Noir	A
Marron	B
Rouge	C
Orange	D
Jaune	E
Vert	non utilisé (masse)
Bleu	G
Violet	H
Gris	J
Blanc	K
Rose	L

Exemple:



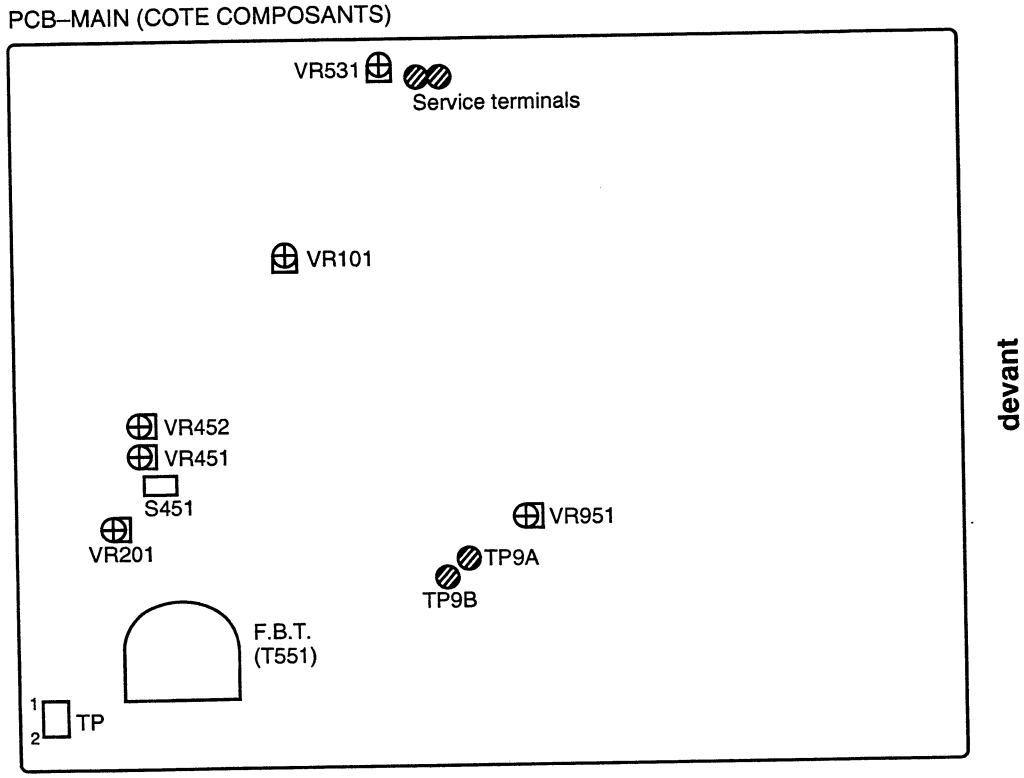
UTILISER UN CORDON D'EXTENSION POUR LA MAINTENANCE

PLATINE	CONNECTEUR	REFERENCE
AV TEXTE PCB-CONT (25" uniquement)	CA (15 BROCHES) HA / BA (8 BROCHES) LA (5 BROCHES)	859C431O30
AV LED	CB (6 BROCHES) HC (3 BROCHES)	859C431O60

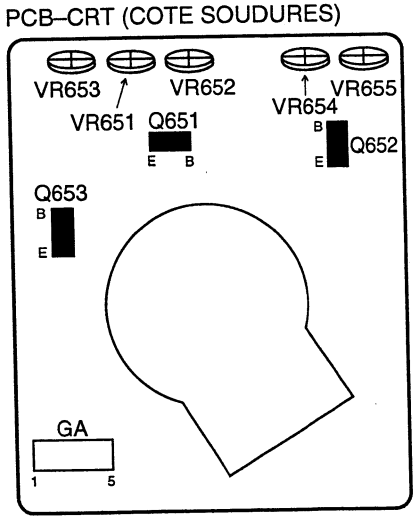
REGLAGES ELECTRIQUES

EMPLACEMENT DES POINTS TEST ET AJUSTEMENTS

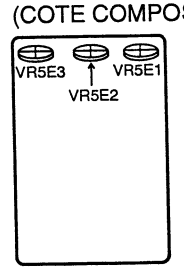
PCB–MAIN (COTE COMPOSANTS)



PCB–CRT (COTE SOUDURES)



PCB-PCC-CONT (Modèle 25" uniquement)
(COTE COMPOSANTS)

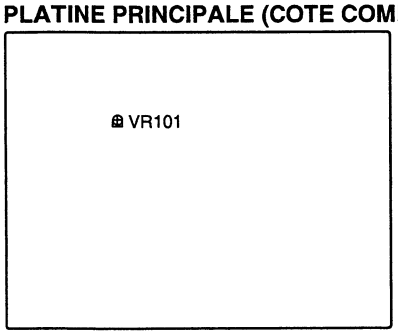


[CIRCUIT VIF] 1. RF AGC	**But du réglage**	Une meilleure réception du signal d'antenne.
	Symptôme lors d'un ajustement incorrecte	Mauvais rapport S/N ou sur-modulation.

Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal d'antenne
Fiche d'entrée	Fiche d'antenne

1. Appliquer un signal d'antenne (programme).
2. Régler AFT ON.
3. Ajuster VR101 afin de supprimer la sur-modulation ou le battement entre le son et l'image.

PLATINE PRINCIPALE (COTE COMPOSANTS)



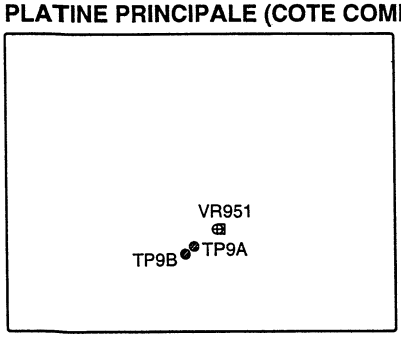
[CIRCUIT ALIMENTATION] 2. TENSION B4	**But du réglage**	Ajustement de la valeur d'alimentation pour le circuit déflection horizontale.
	Symptôme lors d'un ajustement incorrecte	Image trop claire ou trop sombre. Largeur d'image incorrecte.

Instruments et conditions de mesure	Voltmètre DC
Point Test	(+) TP9A; (–) TP9B
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal d'antenne
Fiche d'entrée	Fiche d'antenne

1. Appliquer un signal d'antenne (programme).
2. Observer la tension entre TP9A et TP9B ((+) sur TP9A).
3. Ajuster VR951 afin d'obtenir une tension identique au tableau ci-dessous.

	21"	25"
Tension	120V ± 3V	145 ± 1V

PLATINE PRINCIPALE (COTE COMPOSANTS)

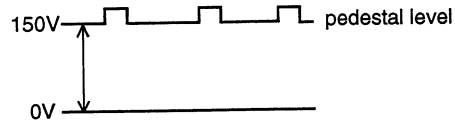


[CIRCUIT CRT] 3. BLANC, CUT OFF	**But du réglage**	Débit des canons RVB.
	Symptôme lors d'un ajustement incorrecte	Monochrome coloré, image trop claire ou trop sombre.

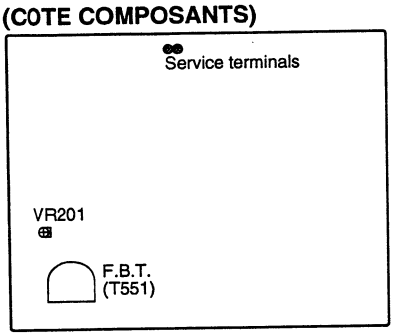
Instruments et conditions de mesure	Oscilloscope (sonde 10 : 1)
Point Test	Collecteur Q651
Synchro EXT.	---
Calibrage	DIV 5V TIM 20µs
Signal d'entrée	---
Fiche d'entrée	---

* Cet ajustement doit suivre les réglages de pureté et de convergence.
* Préchauffer le téléviseur environ 20mn.
* L'ajustement chapitre 7 (SUB CONT) doit être réalisé immédiatement après celui-ci.

1. Sélectionner le mode AV sans signal d'entrée.
2. Mettre les potentiomètres VR651, VR652 et VR653 en position médiane.
3. Mettre les potentiomètres VR654, VR655 et VR201 en position médiane.
4. Observer le signal sur le collecteur de Q651 (utiliser le connecteur GA broche 2 pour la masse).
5. Ajuster VR651 pour que le niveau du piedestal soit de 150V.

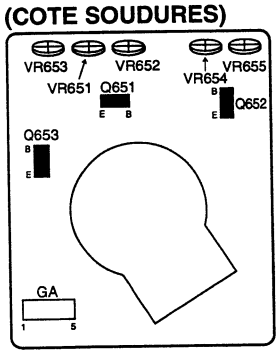


PLATINE PRINCIPALE (COTE COMPOSANTS)



6. Observer le signal sur le collecteur de Q652 (utiliser le connecteur GA broche 2 pour la masse).
7. Ajuster VR652 pour que le niveau du piedestal soit de 150V.
8. Observer le signal sur le collecteur de Q653 (utiliser le connecteur GA broche 2 pour la masse).
9. Ajuster VR653 pour que le niveau de piedestal soit de 150V.

PLATINE CRT (COTE SOUDURES)



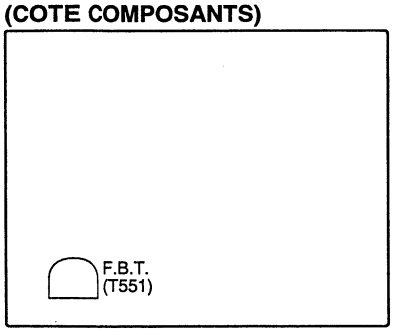
10. Court-circuiter les points "service".
11. Ajuster le potentiomètre "screen" (G2) sur le transformateur THT pour que la ligne rouge, verte ou bleue devienne juste visible.
12. Ajuster 2 des 3 potentiomètres VR651, VR652 et VR653 pour que la ligne horizontale soit blanche.
13. Oter le court-circuit entre les points "service".
14. Appliquer un signal vidéo (blanc).
15. Ajuster VR654 et VR655 pour obtenir un écran blanc uniforme.

4. Focus	**But du réglage**	Contour de l'image.
	Symptôme lors d'un ajustement incorrecte	Image à faible contraste.

Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal d'antenne (programme)
Fiche d'entrée	Fiche d'antenne

1. Appliquer un signal d'antenne (programme).
2. Ajuster le focus sur le transformateur THT pour obtenir un focus optimum.

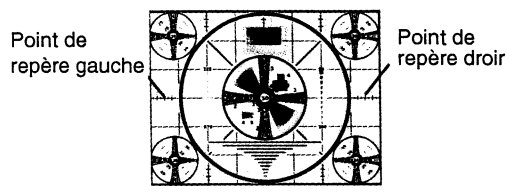
PLATINE PRINCIPALE (COTE COMPOSANTS)



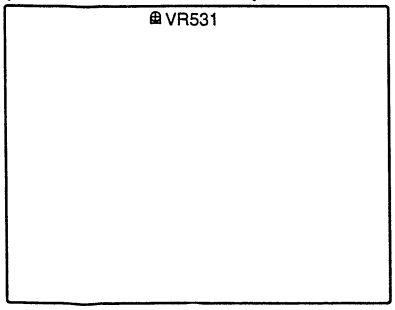
[CIRCUIT DEFLECTION] 5. CENTRE HORIZONTAL	**But du réglage**	Position horizontale de l'image.
	Symptôme lors d'un ajustement incorrecte	Image décalée vers la droite ou vers la gauche.

Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal vidéo (monoscope)
Fiche d'entrée	Péritel

1. Appliquer un signal vidéo (monoscope).
2. Adjuster VR531 afin de centrer les repères droit et gauche.



PLATINE PRINCIPALE (COTE COMPOSANTS)

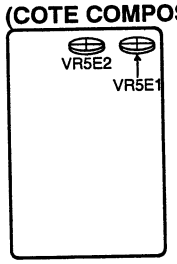


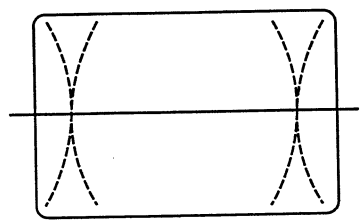
6. PCC EST/OUEST (Modèle 25" uniquement)	**But du réglage**	Réglage de la linéarité horizontale de l'image
	Symptôme lors d'un ajustement incorrecte	Distorsion horizontale de l'image

Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal vidéo (convergence)
Fiche d'entrée	Fiche antenne

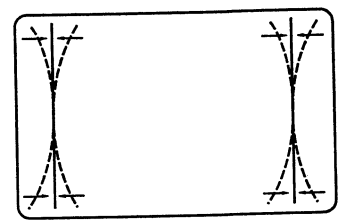
1. Appliquer un signal vidéo (convergence).
2. Appuyer sur la touche "optimum" de la télécommande.
3. Observer la seconde ligne de chaque côté de l'écran.
   Ajuster VR5E1 afin d'obtenir une distorsion symétrique en haut et en bas de la ligne.
4. Ajuster VR5E2 afin que toutes les lignes verticales soient droites.
   Répéter les étapes 3 et 4 si nécessaire.

PCB–PCC CONT (COTE COMPOSANTS)





VR5E1

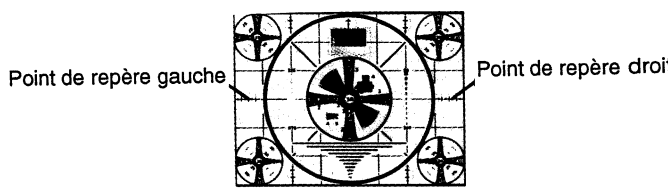


VR5E2

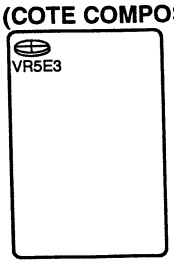
7. AMPLITUDE HORIZONTALE (Modèle 25" uniquement)	**But du réglage**	Réglage de l'amplitude horizontale de l'image
	Symptôme lors d'un ajustement incorrecte	Compression ou extension de l'amplitude horizontale de l'image

Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal vidéo (monoscope)
Fiche d'entrée	Fiche antenne

1. Appliquer un signal vidéo (monoscope).
2. Appuyer sur la touche "optimum" de la télécommande.
3. Ajuster VR5E3 afin que la somme des points de repére droit et gauche soit de 4.5 ~ 5.8.



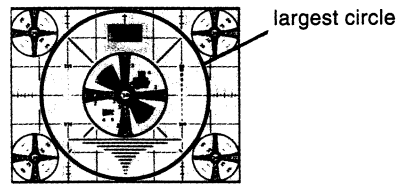
PCB-PCC-CONT (COTE COMPOSANTS)



8. AMPLITUDE VERTICALE LINEARITE VERTICALE CENTRAGE VERTICALE	**But du réglage**	Réglage de l'amplitude et de la linéarité verticale de l'image.
	Symptôme lors d'un ajustement incorrecte	Amplitude et linéarité verticale de l'image incorrecte.

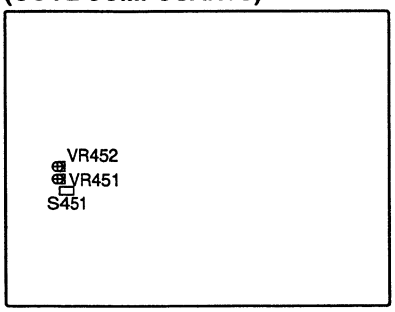
Instruments et conditions de mesure	---
Point Test	---
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal vidéo (monoscope)
Fiche d'entrée	Péritel

1. Appliquer un signal vidéo (monoscope).
2. Appuyer sur la touche "optimum" de la télécommande.
3. Ajuster VR452 afin d'obtenir environ 90% de l'amplitude verticale.
4. Ajuster VR451 afin d'ajuster la linéarité verticale.
5. Ajuster VR452 afin d'obtenir un cercle parfait.
6. Ajuster S451 pour que le cercle soit au centre de l'image.



monoscope

PLATINE PRINCIPALE (COTE COMPOSANTS)



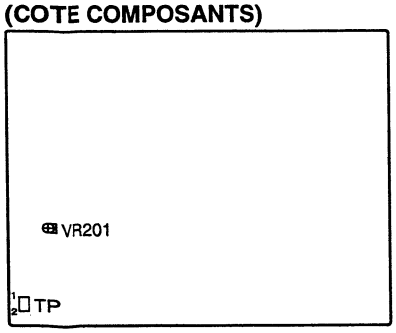
[CIRCUIT VIDEO] 9. SUB CONT	**But du réglage**	Courant de faisceau correct.
	Symptôme lors d'un ajustement incorrecte	Image trop claire ou trop sombre.

Instruments et conditions de mesure	Milliampèremètre DC
Point Test	(+) broche 1 connecteur TP (–) broche 2 connecteur TP
Synchro EXT.	---
Calibrage	---
Signal d'entrée	Signal vidéo (barres de couleur)
Fiche d'entrée	Péritel

* Préchauffer le téléviseur environ 20 mn.
1. Appliquer un signal vidéo (barres de couleur).
2. Appuyer sur la touche "optimum" de la télécommande.
3. Observer la valeur du courant de faisceau sur le connecteur TP entre les broches 1 et 2 (le + broche 1).
4. Ajuster VR201 afin d'obtenir un courant de faisceau égal au tableau ci-dessous.

	21"	25"
Courant de faisceau	830 ± 20µA	790 ± 20µA

PLATINE PRINCIPALE (COTE COMPOSANTS)



PARTS LIST

MODEL : CT – 21M2FM/CT – 25M2FM

In order to expedite delivery of replacement part orders.

Specify : 1. Model number/Serial number
2. Part number and Description
3. Quantity

Unless full information is supplied, delay in execution of orders will result.

⚠ : Critical components

MARK	B	C	D	F	G	J	K
TOLERANCE (%)	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10

MARK	M	N	V	X	Z	P	Q
TOLERANCE (%)	± 20	± 30	+ 10 – 10	+ 40 – 20	+ 80 – 20	+ 100 – 0	+ 30 – 10

MARK	B	C	D	F	G
TOLERANCE (pF)	± 0.1	± 0.25	± 0.5	± 1	± 2

ABBREVIATION

[21] : CT – 21M2FM

[25] : CT – 25M2FM

[21] : CT – 21M2FM [25] : CT – 25M2FM

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
		TUBES		
⚠ V 271	255P917010	CRT ASSY	A51EBV13X01	[21]
⚠ V 271	255P914030	CRT ASSY	A59EAK71X11	[25]
		INTEGRATED CIRCUITS		
IC 3C1	272P935010	IC	TDA9830	
IC 3C2	272P852010	IC	CXA1279AS	
IC 3C3	272P853010	IC	CXA1315P	
IC101	272P847010	IC	TDA8362	
IC150	266P192020	IC	LA7910	
IC2J1	272P016010	IC	M51326P	
IC361	272P854010	IC	LA4597	
IC451	266P405010	IC	AN5521	
IC5E1	272P406010	IC	TEA2031A	[25]
IC601	272P848010	IC	TDA4661	
IC631	272P849010	IC	TDA8395	
IC701	272P850010	IC	PCA84C840	
IC702	274P188010	IC	MN24C04N	
IC703	266P010020	IC	μPC574J-K	
IC901	272P514010	IC	TEA2261	
IC951	267P076010	IC	SI-3120C	
IC952	266P922010	IC	μPC78M05H	
IC954	272P856010	IC	μPC78M08AHF	
		TRANSISTORS		
Q 3C1	260P356010	TRANSISTOR	2SC1906	
Q 3C2	260P544030	TRANSISTOR	JA101-Q	
Q 3C3	260P543050	TRANSISTOR	JC501-Q	
Q 102	260P603010	TRANSISTOR	DTA124ES/UN4112	
Q 103	260P543050	TRANSISTOR	JC501-Q	
Q 105	260P603010	TRANSISTOR	DTA124ES/UN4112	
Q 111	260P543050	TRANSISTOR	JC501-Q	
Q 130	260P543050	TRANSISTOR	JC501-Q	
Q 231	260P543050	TRANSISTOR	JC501-Q	
Q 251	260P544030	TRANSISTOR	JA101-Q	
Q 2J1	260P632010	TRANSISTOR	DTC124ES	
Q 2J2	260P632010	TRANSISTOR	DTC124ES	
Q 2J3	260P632010	TRANSISTOR	DTC124ES	
Q 2J4	260P632010	TRANSISTOR	DTC124ES	
Q 2J5	260P632010	TRANSISTOR	DTC124ES	
Q 2J7	260P543050	TRANSISTOR	JC501-Q	
Q 301	260P543050	TRANSISTOR	JC501-Q	
Q 331	260P543050	TRANSISTOR	JC501-Q	
Q 332	260P543050	TRANSISTOR	JC501-Q	
Q 361	260P603010	TRANSISTOR	DTA124ES/UN4112	
Q 362	260P632010	TRANSISTOR	DTC124ES	
Q 363	260P632010	TRANSISTOR	DTC124ES	
Q 3J1	260P543050	TRANSISTOR	JC501-Q	
Q 431	260P349020	TRANSISTOR	2SC1472K-B	[25]
Q 551	260P557010	TRANSISTOR	2SD1555	
Q 552	260P422010	TRANSISTOR	2SC2482	
Q 5E1	260P543050	TRANSISTOR	JC501-Q	[25]
Q 651	260P571010	TRANSISTOR	2SC3789-D, E	
Q 652	260P571010	TRANSISTOR	2SC3789-D, E	
Q 653	260P571010	TRANSISTOR	2SC3789-D, E	
Q 654	260P544030	TRANSISTOR	JA101-Q	
Q 701	260P559060	TRANSISTOR	2SC1740S-S, E	
Q 702	260P544030	TRANSISTOR	JA101-Q	
Q 703	260P544030	TRANSISTOR	JA101-Q	
Q 704	260P544030	TRANSISTOR	JA101-Q	
Q 705	260P543050	TRANSISTOR	JC501-Q	
Q 706	260P632010	TRANSISTOR	DTC124ES	
Q 707	260P603010	TRANSISTOR	DTA124ES/UN4112	
Q 708	260P603010	TRANSISTOR	DTA124ES/UN4112	
Q 710	260P632010	TRANSISTOR	DTC124ES	
Q 901	260P572010	TRANSISTOR	2SD1556	
Q 902	260P543050	TRANSISTOR	JC501-Q	
Q 953	260P543050	TRANSISTOR	JC501-Q	
		DIODES		
D 3C1	264P370010	DIODE	1N4148	
D 3C2	264P370010	DIODE	1N4148	
D 3C3	264P463070	DIODE	RD9.1EB2	
D 3C4	264P370010	DIODE	1N4148	
D 3C5	264P370010	DIODE	1N4148	
D 101	264P077010	DIODE	MC301	
D 150	264P370010	DIODE	1N4148	
D 151	264P370010	DIODE	1N4148	
D 152	264P370010	DIODE	1N4148	
D 154	264P370010	DIODE	1N4148	
D 155	264P370010	DIODE	1N4148	
D 231	264P483080	DIODE	RD5.1FB2	
D 233	264P483080	DIODE	RD5.1FB2	
D 234	264P483080	DIODE	RD5.1FB2	
D 237	264P483080	DIODE	RD5.1FB2	
D 251	264P483080	DIODE	RD5.1FB2	
D 252	264P483080	DIODE	RD5.1FB2	
D 253	264P483080	DIODE	RD5.1FB2	
D 255	264P370010	DIODE	1N4148	
D 256	264P370010	DIODE	1N4148	
D 280	264P462090	DIODE	RD7.5EB3	
D 281	264P462090	DIODE	RD7.5EB3	
D 282	264P462090	DIODE	RD7.5EB3	
D 2J1	264P370010	DIODE	1N4148	
D 2J2	264P370010	DIODE	1N4148	
D 451	264P371010	DIODE	BYD33G	
D 452	264P371010	DIODE	BYD33G	
D 453	264P371010	DIODE	BYD33G	
D 531	264P370010	DIODE	1N4148	
D 551	264P533010	DIODE	RS 4FS	[25]
D 552	264P358070	DIODE	RU 4AM	[25]
D 553	264P371010	DIODE	BYD33G	
D 554	264P463020	DIODE	RD8.2EB2	
D 555	264P371010	DIODE	BYD33G	
D 556	264P371010	DIODE	BYD33G	
D 557	264P465010	DIODE	RD12EB1	
D 558	264P371010	DIODE	BYD33G	
D 559	264P462090	DIODE	RD7.5EB3	
D 5E1	264P370010	DIODE	1N4148	[25]

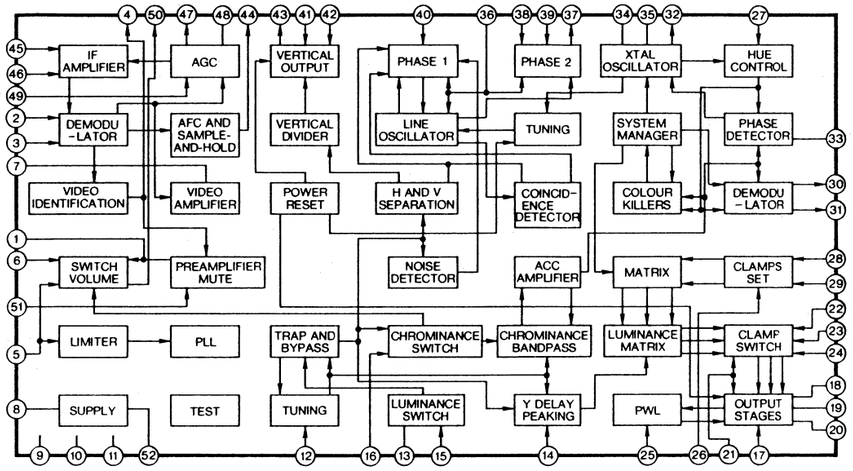
[21] : CT – 21M2FM　　[25] : CT – 25M2FM

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
D 5E2	264P467080	DIODE	RD20EB3	[25]
D 601	264P483080	DIODE	RD5.1FB2	
D 651	264P370010	DIODE	1N4148	
D 702	264P370010	DIODE	1N4148	
D 704	264P370010	DIODE	1N4148	
D 706	264P370010	DIODE	1N4148	
D 710	264P370010	DIODE	1N4148	
D 711	264P370010	DIODE	1N4148	
D 712	264P370010	DIODE	1N4148	
D 714	264P370010	DIODE	1N4148	
D 715	264P370010	DIODE	1N4148	
D 716	264P370010	DIODE	1N4148	
D 717	264P370010	DIODE	1N4148	
D 791	264P584020	LIGHT EMITTING DIODE	SML1216W-C, D	
D 901	264P376010	DIODE	BYW56	
D 902	264P376010	DIODE	BYW56	
D 903	264P376010	DIODE	BYW56	
D 904	264P376010	DIODE	BYW56	
D 905	264P371010	DIODE	BYD33G	
D 906	264P372010	DIODE	BYV96E	
D 907	264P481060	DIODE	RD3.0FB2	
D 908	264P370010	DIODE	1N4148	
D 909	264P481060	DIODE	RD3.0FB2	
D 951	264P358070	DIODE	RU 4AM	
D 952	264P358070	DIODE	RU 4AM	
D 954	264P358070	DIODE	RU 4AM	
D 955	264P461080	DIODE	RD6.2EB3	
D 956	264P370010	DIODE	1N4148	
		OTHER SEMICONDUCTORS		
⚠ RP991	265P071050	POSITIVE THERMISTOR	〈180N〉	
TH531	269P020010	THYRISTOR	N13T1	
		FILTERS		
CF 3A1	296P123040	SAW FILTER	41MA70Z	
CF 3A2	296P125010	SAW FILTER	SAF32.4MA70Z	
CF111	296P084010	CERAMIC TRAP		
CF112	296P024050	CERAMIC TRAP	TPS6.5MB	
CF301	296P014020	CERAMIC FILTER	SFE-5.5MA	
SF101	296P034040	SAW FILTER		
		COILS		
⚠	409B099010	DEGAUSSING COIL		[21]
⚠	409B041080	DEGAUSSING COIL		[25]
L 101	321C041050	RF COIL	JISC-3212-0.4	
L 104	323P175020	VIF COIL	38.9 39.5MHz	
L 111	325C120010	PEAKING COIL	1.0μH-M	
L 112	325C161010	PEAKING COIL	6.8μH-K	
L 201	325C120010	PEAKING COIL	1.0μH-M	
L 2J1	325C111030	PEAKING COIL	10μH-K	
L 2J3	325C111030	PEAKING COIL	10μH-K	
L 301	325C161050	PEAKING COIL	15μH-K	
L 331	325C120070	PEAKING COIL	3.3μH-K	
L 332	325C120070	PEAKING COIL	3.3μH-K	
L 333	325C120070	PEAKING COIL	3.3μH-K	
L 334	325C120070	PEAKING COIL	3.3μH-K	
L 335	325C120070	PEAKING COIL	3.3μH-K	
L 336	325C120070	PEAKING COIL	3.3μH-K	
L 337	325C120070	PEAKING COIL	3.3μH-K	
L 361	325C121030	PEAKING COIL	10μH-K	
L 362	325C121030	PEAKING COIL	10μH-K	
L 363	325C121030	PEAKING COIL	10μH-K	
L 451	411P012010	BEAD FERRITE	B-6-31A1-A	
L 531	325C120010	PEAKING COIL	1.0μH-M	
L 551	321C030010	RF COIL	1.0μH-K	
L 552	411D009020	FERRITE CORE FILTER		
L 553	333P012030	H-LIN. COIL		[21]
L 553	333P012010	H-LIN. COIL		[25]
L 554	409P748010	PCC COIL	1MHz	[25]
L 555	409P749010	CHOKE COIL	15MHz	[25]
L 701	325C120010	PEAKING COIL	1.0μH-M	
L 702	325C121030	PEAKING COIL	10μH-K	
L 703	325C121030	PEAKING COIL	10μH-K	
L 704	325C121030	PEAKING COIL	10μH-K	
L 705	325C121030	PEAKING COIL	10μH-K	
L 901	325C121010	PEAKING COIL	6.8μH-K	
L 902	321C030050	RF COIL	2.2μH-K	
L 903	411P001070	FERRITE LEAD	BF60T	
L 905	411P001070	FERRITE LEAD	BF60T	
L 951	325D059060	PEAKING COIL	390μH-K	
L 952	409P674020	FILTER COIL		
L 993	351P047020	LINE FILTER	Z85555TA	
		TRANSFORMERS		
⚠ T 551	334P220020	FLYBACK		[21]
⚠ T 551	334P220010	FLYBACK	T334B22001	[25]
T 552	336P017010	H.DRIVE		
⚠ T 901	350P593010	POWER		[21]
⚠ T 901	350P593020	POWER		[25]
		VARIABLE RESISTORS		
VR101	127C380080	VR-SEMIFIXED	1/5W B10KΩ-M	
VR201	127C381020	VR-SEMIFIXED	1/5W B100KΩ-M	
VR451	127C380070	VR-SEMIFIXED	1/5W B5KΩ-M	[25]
VR452	127C380010	VR-SEMIFIXED	1/5W B200Ω-M	
VR531	127C380080	VR-SEMIFIXED	1/5W B10KΩ-M	
VR5E1	127C180060	VR-SEMIFIXED	1/5W B3KΩ-M	[25]
VR5E2	127C181050	VR-SEMIFIXED	1/5W B500KΩ-M	[25]
VR5E3	127C190050	VR-SEMIFIXED	1/5W B2KΩ-M	[25]
VR651	127C180010	VR-SEMIFIXED	1/5W B200Ω-M	
VR652	127C180010	VR-SEMIFIXED	1/5W B200Ω-M	
VR653	127C180010	VR-SEMIFIXED	1/5W B200Ω-M	
VR654	127C180040	VR-SEMIFIXED	1/5W B1KΩ-M	
VR655	127C180040	VR-SEMIFIXED	1/5W B1KΩ-M	
VR951	127C380080	VR-SEMIFIXED	1/5W B10KΩ-M	[21]
VR951	127C380090	VR-SEMIFIXED	1/5W B20KΩ-M	[25]
		RESISTORS		
R 3D1	103P370010	FUSE	1/4W 10Ω-J	
⚠ R 368	103P378060	FUSE	1/4W 3.3Ω-J	

[21] : CT – 21M2FM [25] : CT – 25M2FM

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
⚠ R 369	103P378060	FUSE	1/4W 3.3Ω-J	
⚠ R 456	103P378040	FUSE	1/4W 2.2Ω-J	
R 554	102P243020	CEMENT METAL	5W 3.9KΩ-K/J	
R 557	102P220010	CEMENT WIRE	10W 10Ω-K/J	
⚠ R 558	103P442050	FUSE METAL	1W 1.0KΩ-K/J	
⚠ R 559	103P397090	FUSE	1/2W 0.82Ω-J	[21]
⚠ R 561	103P397090	FUSE	1/2W 0.82Ω-J	
⚠ R 566	103P378000	FUSE	1/4W 1.0Ω-J	
⚠ R 681	103P447080	FUSE METAL	1W 0.68Ω-K/J	[21]
⚠ R 681	103P448030	FUSE METAL	1W 1.8KΩ-K/J	[25]
R 921	109D074010	CEMENT METAL	5W 1.8KΩ-K/J	
R 993	102P081040	CEMENT WIRE	7W 4.7Ω-K	
		CAPACITORS AND TRIMMERS		
C 557	189P071080	C-M-PLASTIC-PP	200V 0.47μF-J	[21]
C 557	189P071020	C-M-PLASTIC-PP	200V 0.51μF-J	[25]
C 558	189P071080	C-M-PLASTIC-PP	200V 0.47μF-J	[25]
C 569	189P071080	C-M-PLASTIC-PP	200V 0.47μF-J	[21]
C 904	185D059040	ELECTROLYTIC-C	H385V 150M	
⚠ C 981	189P091010	CERAMIC CAPACITOR	AC400V E4700pF-M	
		SWITCHES		
S 451	434C021010	LEVER SWITCH	1-3	
S 701	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
S 702	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
S 703	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
S 704	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
S 705	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
S 706	432P066030	KEY BOARD SWITCH	1-1 L=8.35 S	
⚠ S 991	432C048010	PUSH SWITCH	AC250V 5A/80A	
		MISCELLANEOUS		
⚠	449C081010	CRT SOCKET		
⚠ F 991	283D047040	FUSE	2A-T	
J 361	451C082010	MICROPHONE JACK		
⚠ PC951	268P056010	PHOTO COUPLER	CNY17GF-4	
SP391	480P403030	SPEAKER	C120PX1194MA2	
SP392	480P403030	SPEAKER	C120PX1194MA2	
TU101	295P260060	TUNER	ENV-578B0F2	
X 601	285P132020	CRYSTAL RESONATOR	TDA8362	
X 701	285P118030	CRYSTAL RESONATOR	9.8304 MHz	
⚠ Z 551	299P087060	SURGE PROTECTOR	PRF 2000	[25]
Z 701	939P296090	PREAMP UNIT		
⚠ Z 951	299P087050	SURGE PROTECTOR	PRF 1600	
⚠ Z 953	299P087060	SURGE PROTECTOR	PRF 2000	
		PRINTED CIRCUIT BOARD ASSY'S		
⚠	930C606001	AUDIO PCB ASSY		
⚠	920D443040	AV PCB ASSY		[21]
⚠	920D443030	AV PCB ASSY		[25]
⚠	920D442040	CRT PCB ASSY		[21]
⚠	920D442030	CRT PCB ASSY		[25]
⚠	920A395008	MAIN PCB ASSY		[21]
⚠	920A395007	MAIN PCB ASSY		[25]
⚠	920D445040	PCC CONTROL PCB ASSY		[21]
⚠	920D445030	PCC CONTROL PCB ASSY		[25]
⚠	920D444040	POWER SUB PCB ASSY		[21]
⚠	920D444030	POWER SUB PCB ASSY		[25]
		MECHANICAL PARTS		
	669D220030	SCREW	3X10 46LA005	
	669D221060	SCREW	4X16 46LA005	
		COSMETIC PARTS		
⚠	246C022070	AC POWER CORD		
⚠	700C148070	BACK COVER		[21]
⚠	700C149030	BACK COVER		[25]
	702C933050	DOOR		[21]
	702C934060	DOOR		[25]
	761C437010	DOOR CATCH		
	700A643030	FRONT CABINET		[21]
	700A638030	FRONT CABINET		[25]
	704C378050	POWER KNOB		[21]
	704C379010	POWER KNOB		[25]
		PACKING PARTS AND ACCESSORY		
	803A317010	PACKING CUSHION		[21]
	803A313010	PACKING CUSHION		[25]
	831D283010	PACKING BAG		
	801C181030	PACKING CASE		[21]
	801C171030	PACKING CASE		[25]
	831D222010	PACKING BAG		[21]
	831D222030	PACKING BAG		[25]
	829D138010	PACKING SHEET	1700X375X.5	[21]
	829D138020	PACKING SHEET	1900X375X.5	[25]
⚠	872C080070	INSTRUCTION BOOK		
⚠	290P015020	REMOTE HAND UNIT		

IC101 TDA8361



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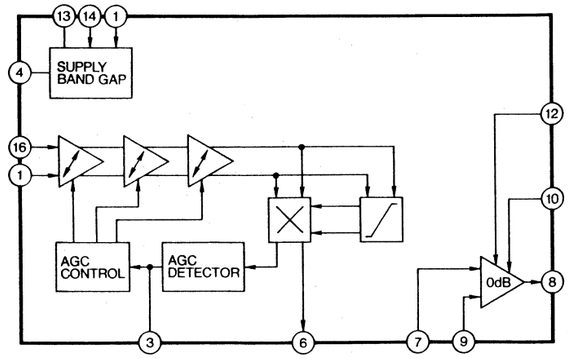

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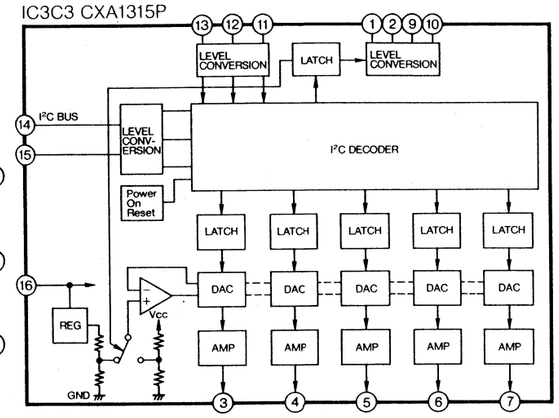

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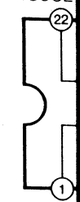
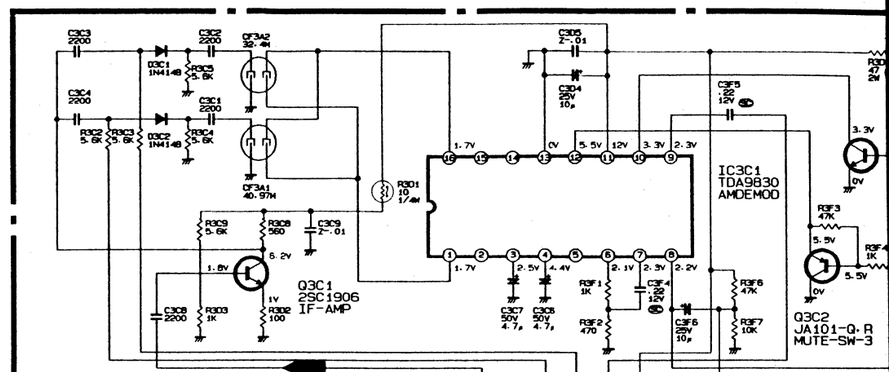
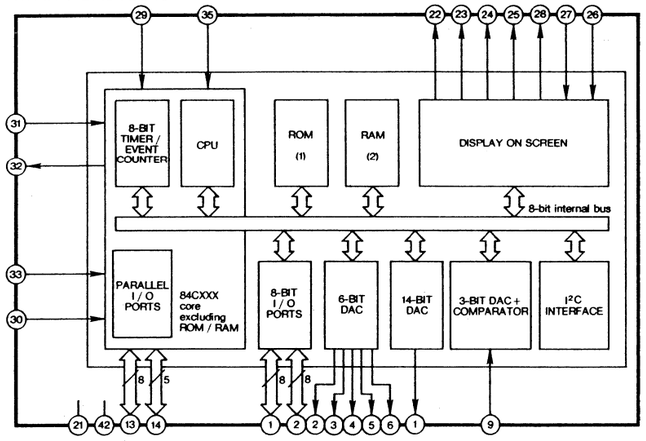


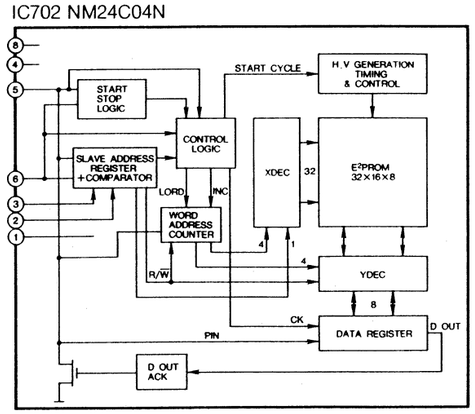
PCB-AUDIO



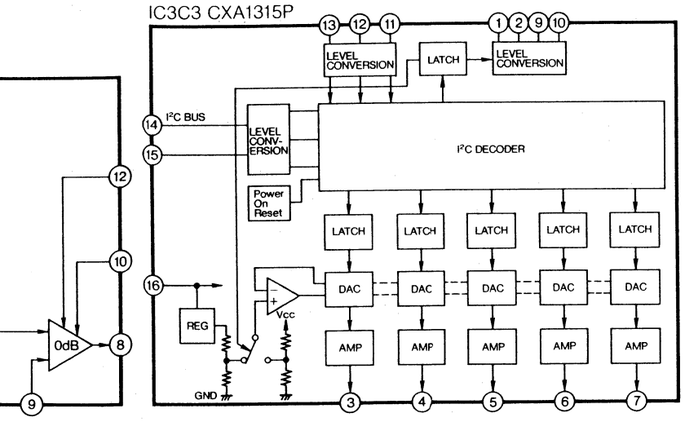
IC701 PCA84C840



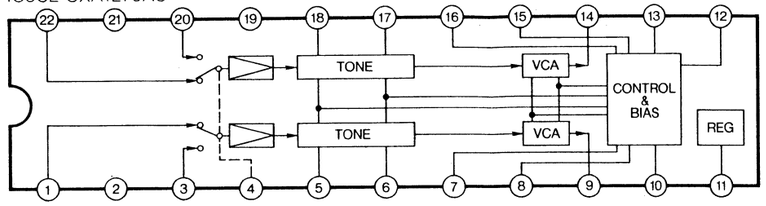
IC702 NM24C04N



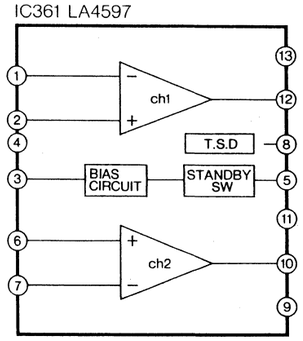
IC3C3 CXA1315P



IC3C2 CXA1279AS



IC361 LA4597



SCHEMATIC DIAGRAM MODE

IC3C1 TDA9830 AMDEMOD

IC3C3 CXA1315P DAC

IC3C2 CXA1279AS STEREO-CONTROL

Q3C1 2SC1906 IF-AMP

Q3C2 JA101-Q.R MUTE-SW-3

Q3C3 JC501-Q.R FM-AM-SW

IC361 LA4597 AUDIO

IC101 TDA8362 VIF/SIF/VCJ

IC531 TDA8395 SECAM-DECODER

IC601 TDA4661 1HDL

IC702 NM24C04N E2PROM

IC701 PCA84C840 μCON /064UK

Q701 2SC1740S-E TU-PULSE-AMP

IC703 μPC574-JK 32V REG

Q707 DTA124ES V-SYNC-1

Q708 DTA124ES V-SYNC-2

Q331 JC501-Q.R AUDIO-OUT-1

Q301 JC501-Q.R VIDEO-DET-2

Q102 DTA124ESTP L-VL-SW

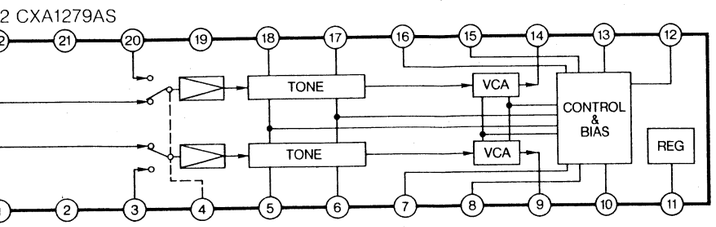
Q111 JC501-Q.R VIDEO-DET-1

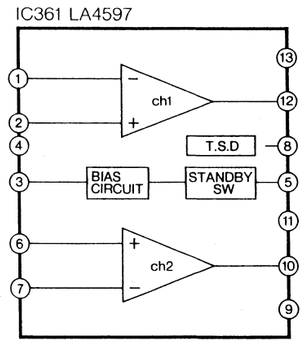
Q431 2SC1472K-B V-RAMP-BUFFER

CT-25M2FM ONLY

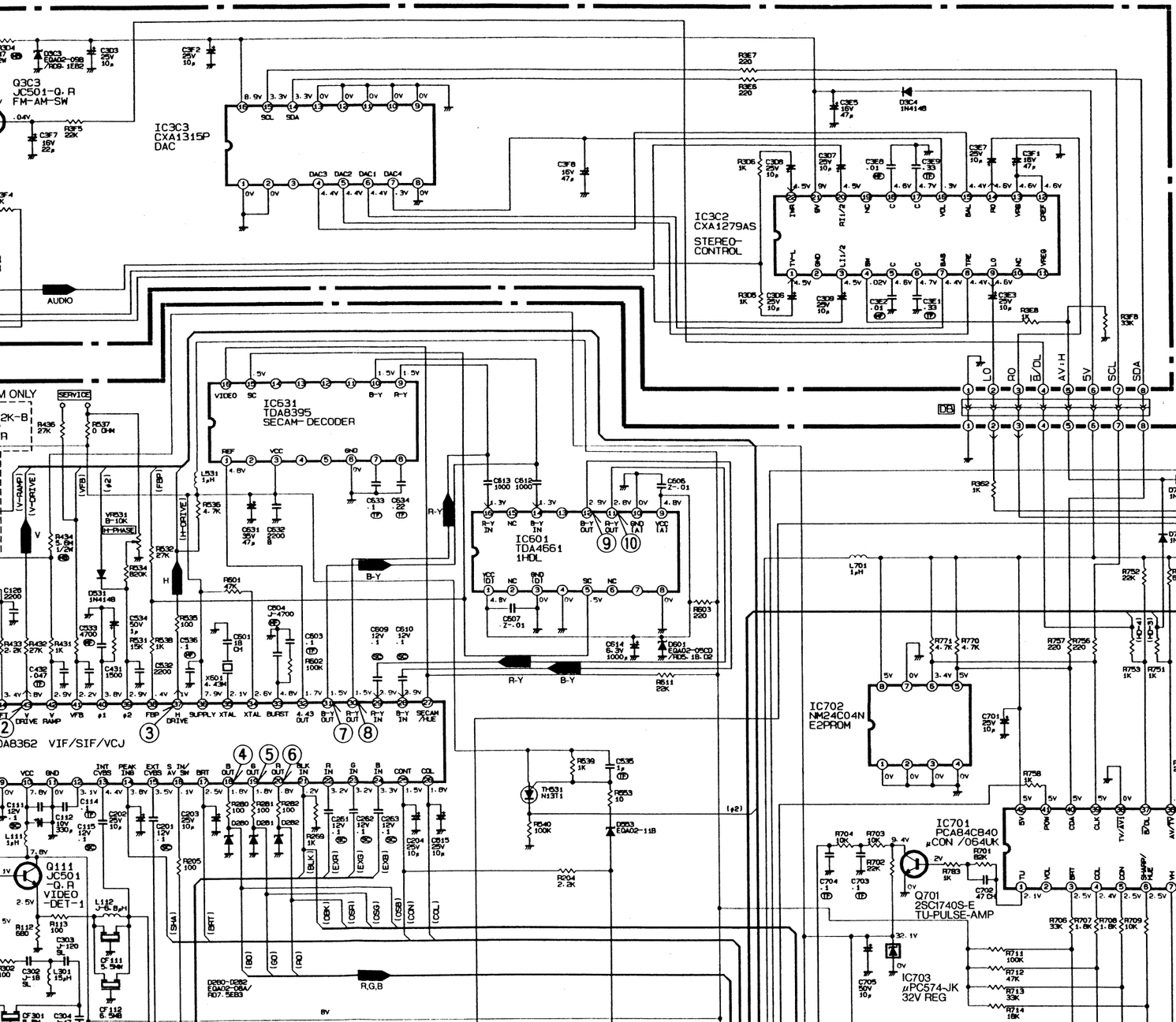
IC150 LA7910 BAND-SW

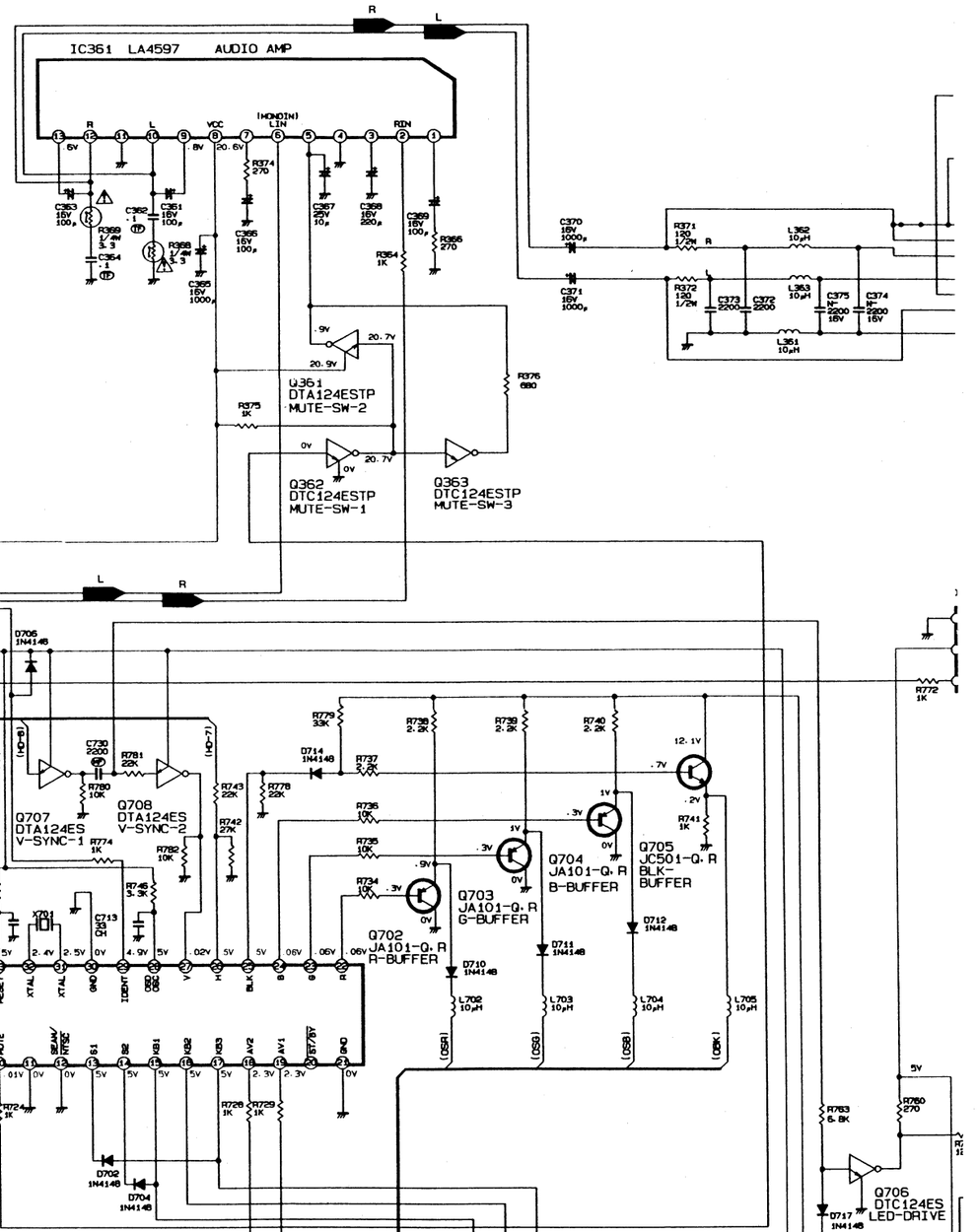
IC101 TDA8362 VIF/SIF/VCJ





SCHEMATIC DIAGRAM MODELS: CT-21M2FM CT-25M2FM





IC601
TDA4661
1HDL

IC702
NM24C04N
E2PROM

IC701
PCA84C840
μCON /064UK

Q707
DTA124ES
V-SYNC-1

Q708
DTA124ES
V-SYNC-2

Q703
JA101-Q, R
G-BUFFER

Q704
JA101-Q, R
B-BUFFER

Q705
JC501-Q, R
BLK-
BUFFER

Q702
JA101-Q, R
R-BUFFER

Q706
DTC124ES
LED-DRIVE

Q701
2SC1740S-E
TU-PULSE-AMP

IC703
μPC574JK
32V REG

IC8362 VIF/SIF/VCJ

Q111
JC501
-Q, R
VIDEO
-DET-1

IC451
AN5521
V-OUT

IC954
μPC78M08HF
8V REG

IC951
SI-3120C
12V REG

IC952
μPC78H05H
5V REG

Q551
2SD1555
H-OUT

Q552
2SC2482
H-DRIVE

Q651
2SC3789-DE
R-OUT

Q652
2SC3789
-DE
B-OUT

SOCKET-CRT

PCB-C

I²C INTERFACE

output buffers

IC150 LA7910 BAND-SW

IC101 TDA8362 VIF/SIF/VCJ

Q231 JC501-Q,R VIDEO-OUT-1

Q251 JA101-Q,R FAST-BLK-BUFFER

Q331 JC501-Q,R AUDIO-OUT-1

Q332 JC501-Q,R AUDIO-OUT-AMP

Q105 DTA124ESTP POS/NEG-SW

Q301 JC501-Q,R VIDEO-DET-2

Q102 DTA124ESTP L-VL-SW

Q111 JC501 -Q,R VIDEO -DET-1

Q130 JC501-Q,R VIDEO-DET-3

Q103 JC501-Q,R BG/L-SW

Q2J1~Q2J6 DTC124ES AV-SW-1~6

Q2J7 JC501-Q,R VIDEO-OUT-2

Q3J1 JC501-Q,R AUDIO-OUT-2

Q902 JC501-Q,R BAND-SW

IC451 AN5521 V-OUT

IC951 SI-3120C 12V REG

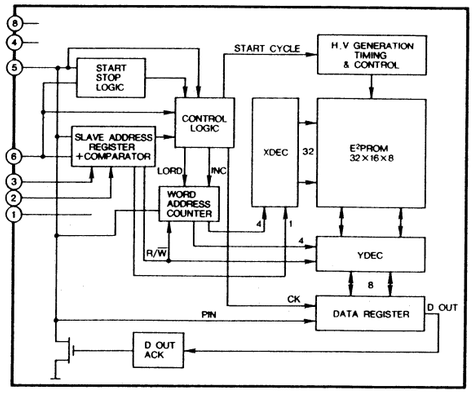
IC952 μPC78H 5V REG

IC901 TEA2261

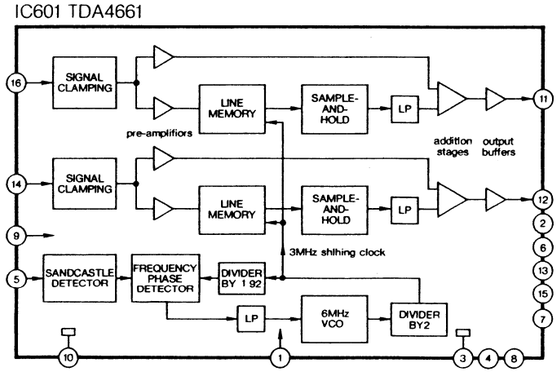
OCON

K1	CH-PRESET	K17	POWER
K2	MUTE	K18	CH-DISP
K3	CH1	K19	CH3
K4	CH4	K20	CH6
K5	CH7	K21	CH9
K6	CH0	K22	CH-BACK
K7	CH-DOWN	K23	MENU
K8	VOL-DOWN	K24	→ · ←
K9	OFF-TIMER	K25	(Ⅰ/Ⅱ)
K10	AV	K26	(CM)
K11	CH2	K27	(TEXT)
K12	CH5	K28	(SIZE)
K13	CH8	K29	(HOLD)
K14	- -	K30	(INDEX)
K15	CH-UP	K31	(TIME/CANCEL)
K16	VOL-UP	K32	(REVEAL)

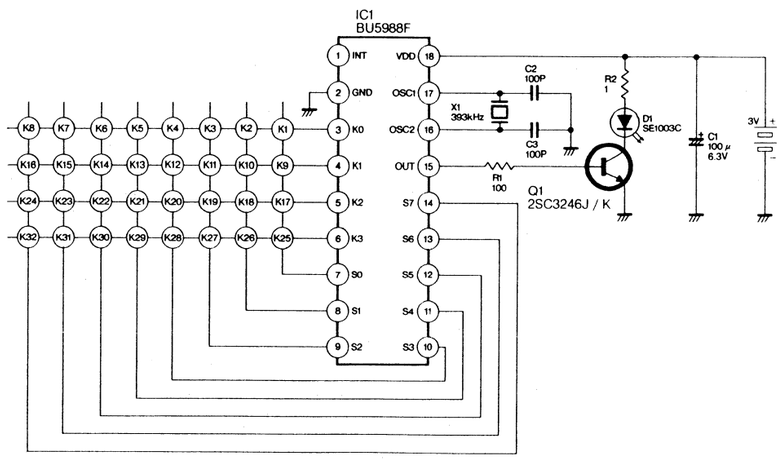
IC702 NM24C04N



IC601 TDA4661

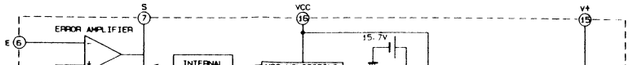


⚠ TRANSMITTER-REMOCON

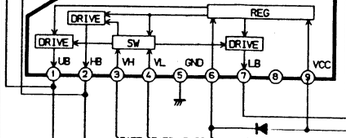


K1	CH−PRESET	K17	POWER
K2	MUTE	K18	CH−DISP
K3	CH1	K19	CH3
K4	CH4	K20	CH6
K5	CH7	K21	CH9
K6	CH0	K22	CH−BACK
K7	CH−DOWN	K23	MENU
K8	VOL−DOWN	K24	→・←
K9	OFF−TIMER	K25	(Ⅰ/Ⅱ)
K10	AV	K26	(CM)
K11	CH2	K27	(TEXT)
K12	CH5	K28	(SIZE)
K13	CH8	K29	(HOLD)
K14	−−	K30	(INDEX)
K15	CH−UP	K31	(TIME/CANCEL)
K16	VOL−UP	K32	(REVEAL)

IC901 TEA2261



IC150 LA7910 BAND-SW



Q231 JC501-Q,R VIDEO-OUT-1

Q251 JA101-Q,R FAST-BLK-BUFFER

Q331 JC501-Q,R AUDIO-OUT-1

Q105 DTA124ESTP POS/NEG-SW

Q332 JC501-Q,R AUDIO-OUT-AMP

Q301 JC501-Q,R VIDEO-DET

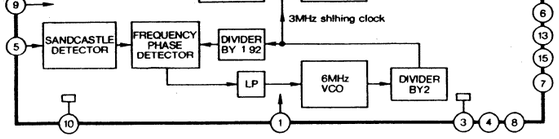
Q102 DTA124ESTP L-VL-SW

Q2J7 JC501-Q,R VIDEO-OUT-2

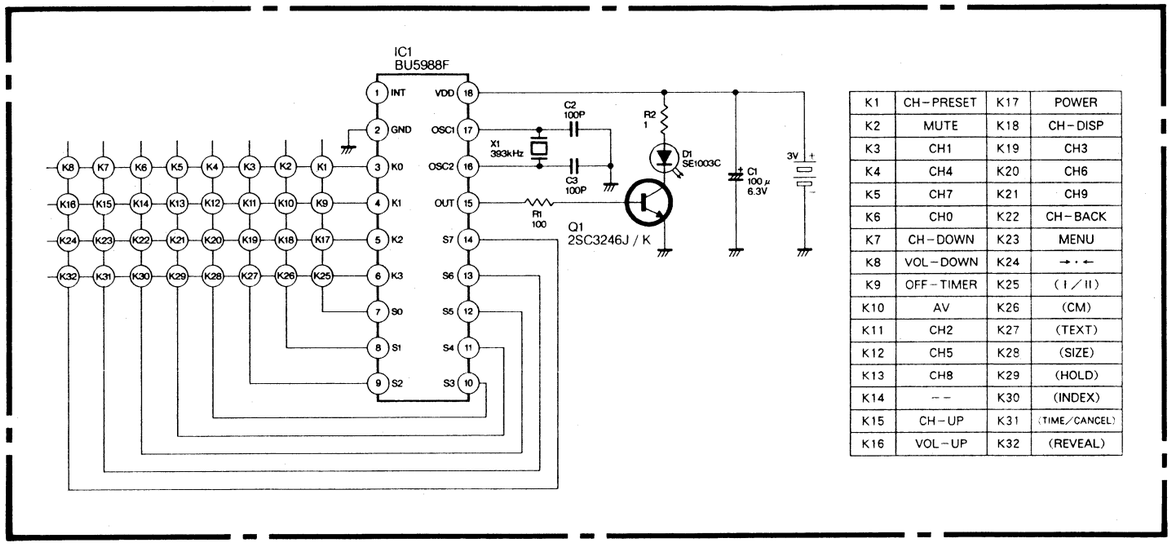
Q3J1 JC501-Q,R AUDIO-OUT-2

Q2J1~Q2J6 DTC124ES AV-SW-1~6

Q902 JC501-Q,R BAND-SW

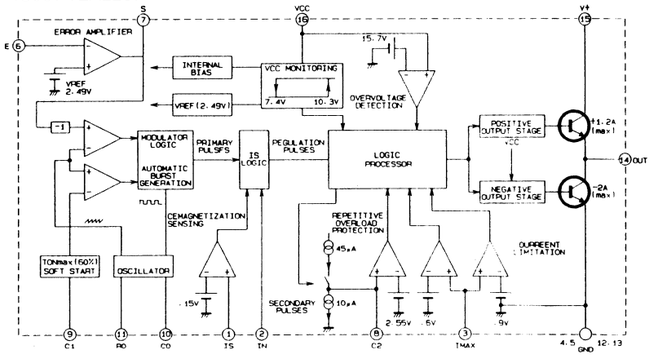


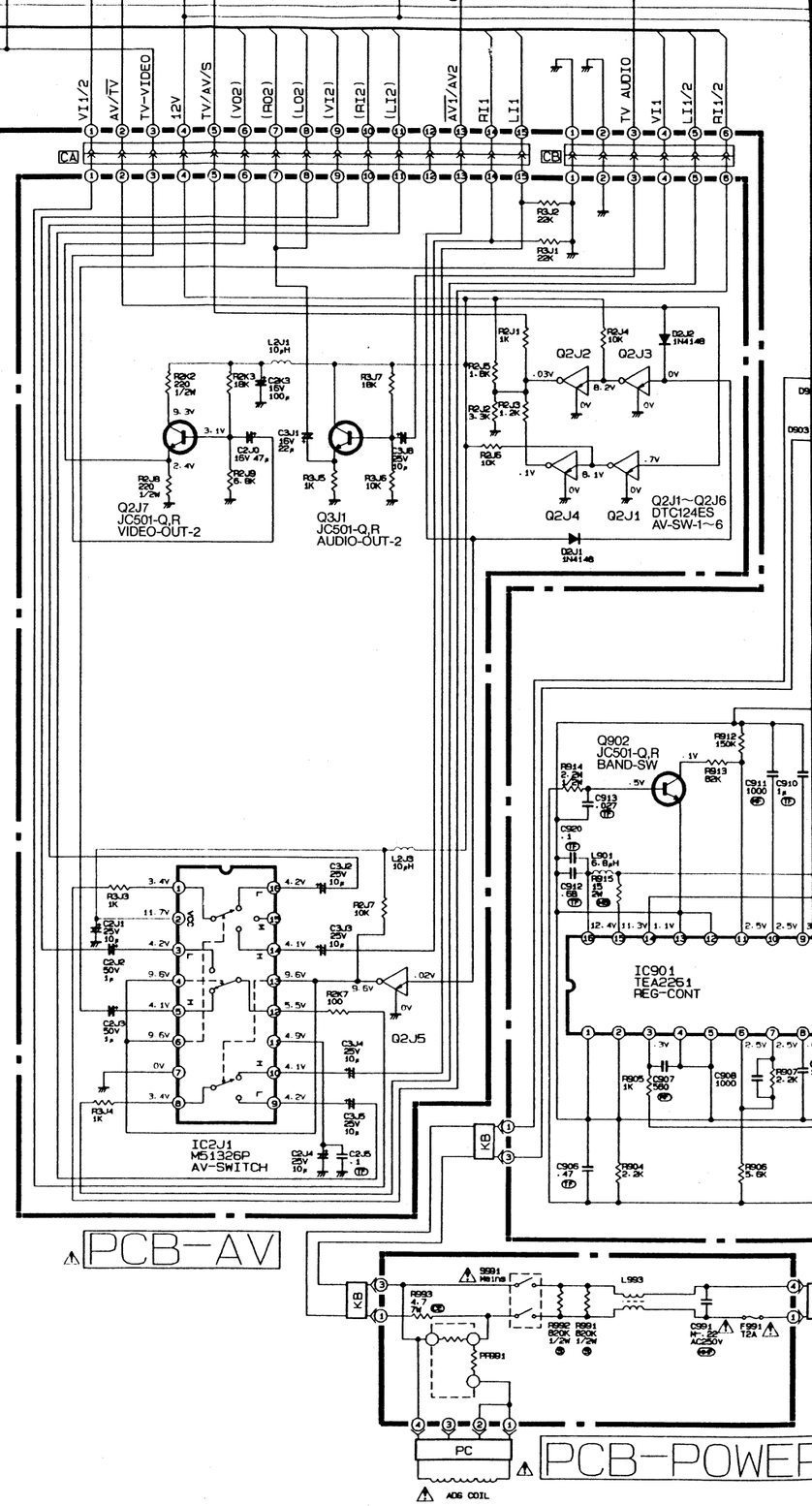
⚠ TRANSMITTER-REMOCON



K1	CH−PRESET	K17	POWER
K2	MUTE	K18	CH−DISP
K3	CH1	K19	CH3
K4	CH4	K20	CH6
K5	CH7	K21	CH9
K6	CH0	K22	CH−BACK
K7	CH−DOWN	K23	MENU
K8	VOL−DOWN	K24	→・←
K9	OFF−TIMER	K25	(Ⅰ/Ⅱ)
K10	AV	K26	(CM)
K11	CH2	K27	(TEXT)
K12	CH5	K28	(SIZE)
K13	CH8	K29	(HOLD)
K14	−−	K30	(INDEX)
K15	CH−UP	K31	(TIME/CANCEL)
K16	VOL−UP	K32	(REVEAL)

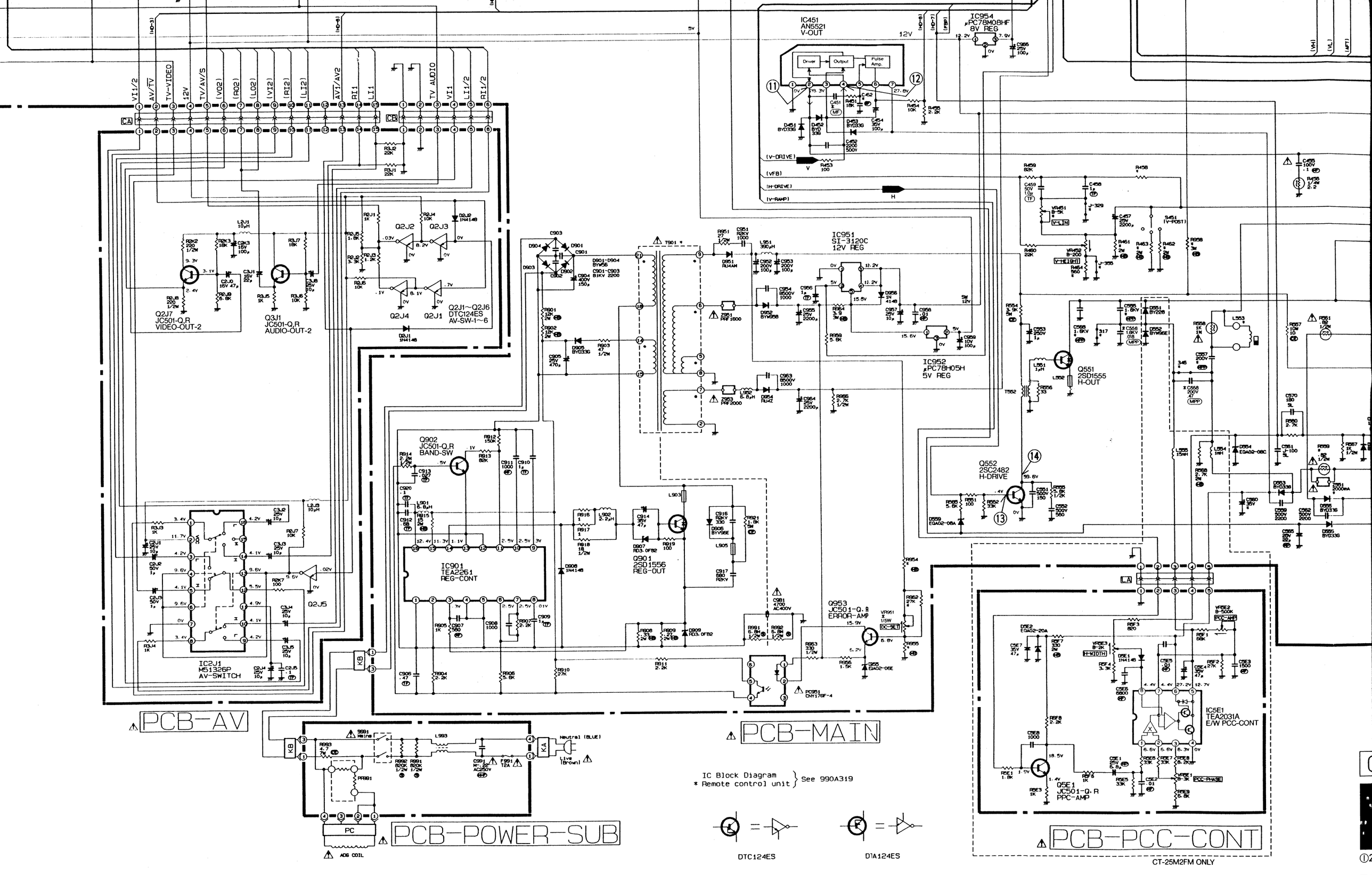
IC901 TEA2261





✱DIFFERENCE TABLE ○:APPLIED −:NOT APPLIED

PARTS / MODELS	C451	C456	C459	C462	C555	C556	C557	C558	C560	C
CT-21M2FM	.068	.039	−	.056	3900	−	.47	−	1000μ	3
CT-25M2FM	.047	.1	○	.047	9100	○	.51	○	3300μ	2



✱DIFFERENCE TABLE ○:APPLIED －:NOT APPLIED

PARTS / MODELS	C451	C456	C459	C462	C555	C556	C557	C558	C560	C568	LINK317	LINK346	R458	R461	R462	R463	R464	R466	R559	R563	R954	R955	R958	R962	V271	VR451	VR951	Z551
CT-21M2FM	.068	.039	－	.056	3900	－	.47	－	1000μ	3300	○	○	39K	2.7	680	1.2K	－	330	○	220K	120K	10K	8.2K	－	A51EBV13X01	－	B10K	－
CT-25M2FM	.047	.1	○	.047	9100	○	.51	○	3300μ	2200	－	－	10K	.68	270	820	○	1K	－	180K	160K	8.2K	12K	○	A59EAK71X11	○	B20K	○

IC451
AN5521
V-OUT

IC954
μPC78M08HF
8V REG

IC951
SI-3120C
12V REG

IC952
μPC78H05H
5V REG

Q551
2SD1555
H-OUT

Q552
2SC2482
H-DRIVE

Q901
2SD1556
REG-OUT

Q953
JC501-Q.R
ERROR-AMP

Q5E1
JC501-Q.R
PPC-AMP

IC5E1
TEA2031A
E/W PCC-CONT

Q651
2SC3789-DE
R-OUT

Q652
2SC3789
-DE
B-OUT

Q653
2SC3789
-DE
G-OUT

Q654
JA101-Q.R
DRIVE-REF

PCB-MAIN

PCB-PCC-CONT
CT-25M2FM ONLY

PCB-SUB

SOCKET-CRT

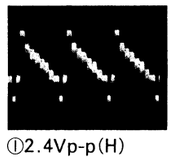
IC Block Diagram
* Remote control unit } See 990A319

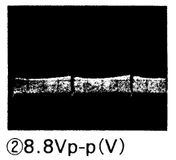
DTC124ES

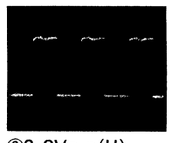
DTA124ES

C568	LINK317	LINK346	R458	R461	R462	R463	R464	R466	R559	R563	R954	R955	R958	R962	V271	VR451	VR951	Z551
3300	○	○	39K	2.7	680	1.2K	–	330	○	220K	120K	10K	8.2K	–	A51EBV13X01	–	B10K	–
2200	–	–	10K	.68	270	820	○	1K	–	180K	160K	8.2K	12K	○	A59EAK71X11	○	B20K	○

CHASSIS WAVEFORMS


①2.4Vp-p(H)

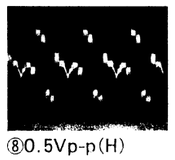

②8.8Vp-p(V)

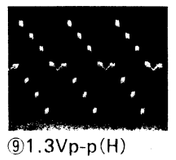

③2.0Vp-p(H)

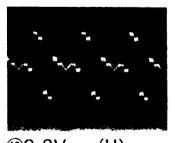
④3.8Vp-p(H)

⑤3.6Vp-p(H)

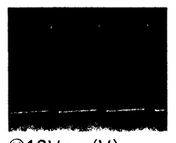
⑥3.6


⑧0.5Vp-p(H)


⑨1.3Vp-p(H)

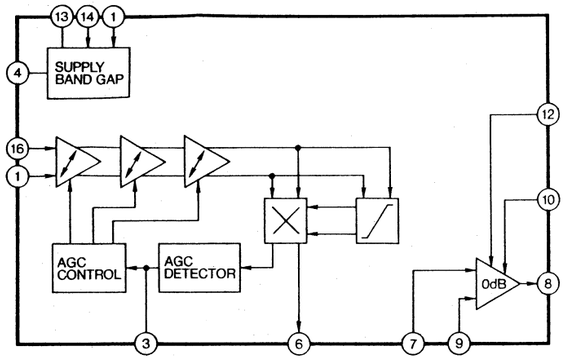

⑩0.9Vp-p(H)

⑪5.5Vp-p(V)

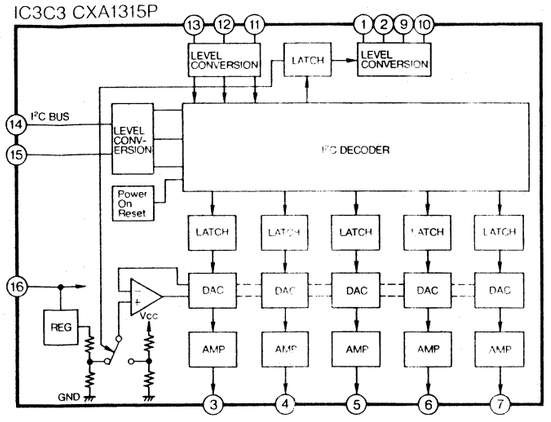

⑫12Vp-p(V)

⑬0.7

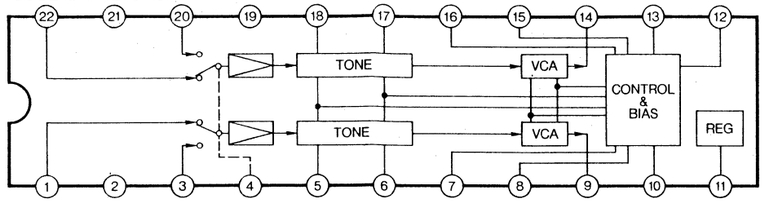
IC3C1 TDA9830



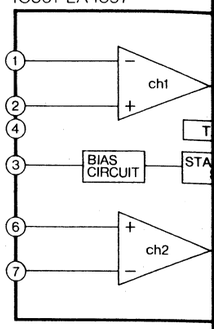
IC3C3 CXA1315P



IC3C2 CXA1279AS



IC361 LA4597



PCB-AUDIO

IC101 TDA8362 VIF/SIF/VCJ

IC1C1 TDA9830 AMDEMOD

IC3C3 CXA1315P DAC

IC3C2 CXA1279 STEREO-CONTROL

IC531 TDA8395 SECAM-DECODER

IC601 TDA4661 1HDL

IC150 LA7910 BAND-SW

Q3C1 2SC1906 IF-AMP

Q3C3 JC501-Q.R FM-AM-SW

Q3C2 JA101-Q.R MUTE-SW-3

Q231 JC501-Q.R VIDEO-OUT-1

Q251 JA101-Q.R FAST-BLK-BUFFER

Q431 2SC1472K-B V-RAMP -BUFFER

Q111 JC501 -Q.R VIDEO -DET-1

Q301 JC501-Q.R VIDEO-DET-2

Q102 DTA124ESTP L-VL-SW

Q331 JC501-Q.R AUDIO-OUT-1

CT-25M2FM ONLY

SERVICE

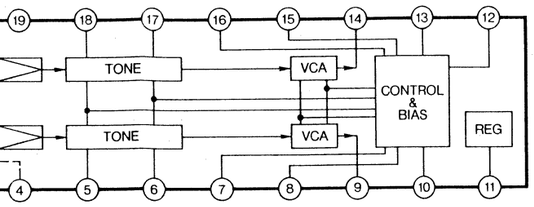
TU101

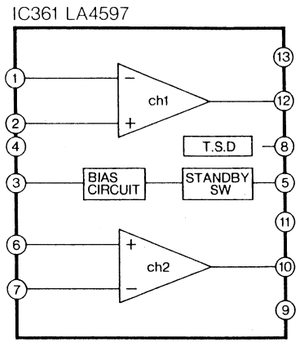
IF

AUDIO

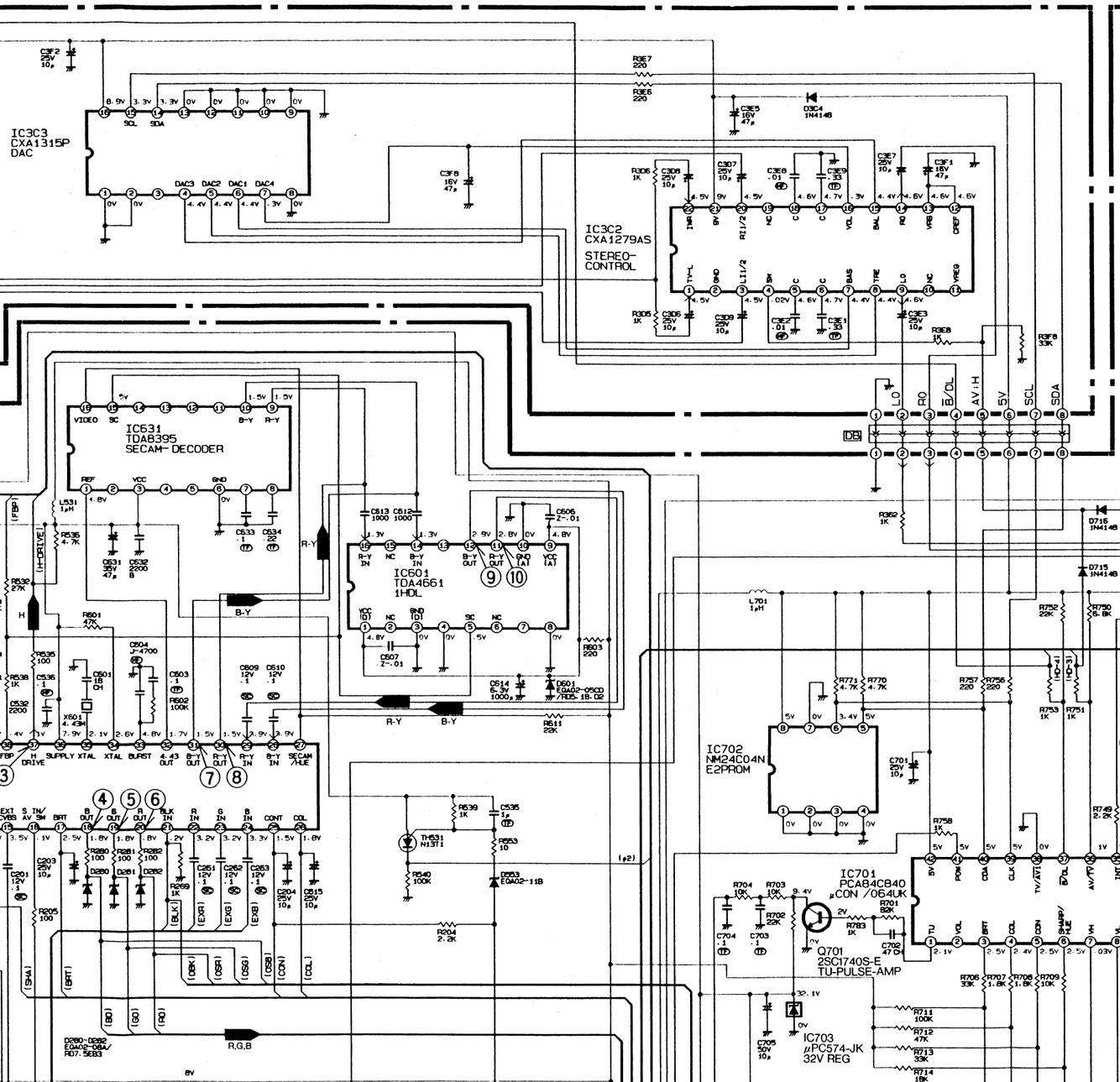
DA

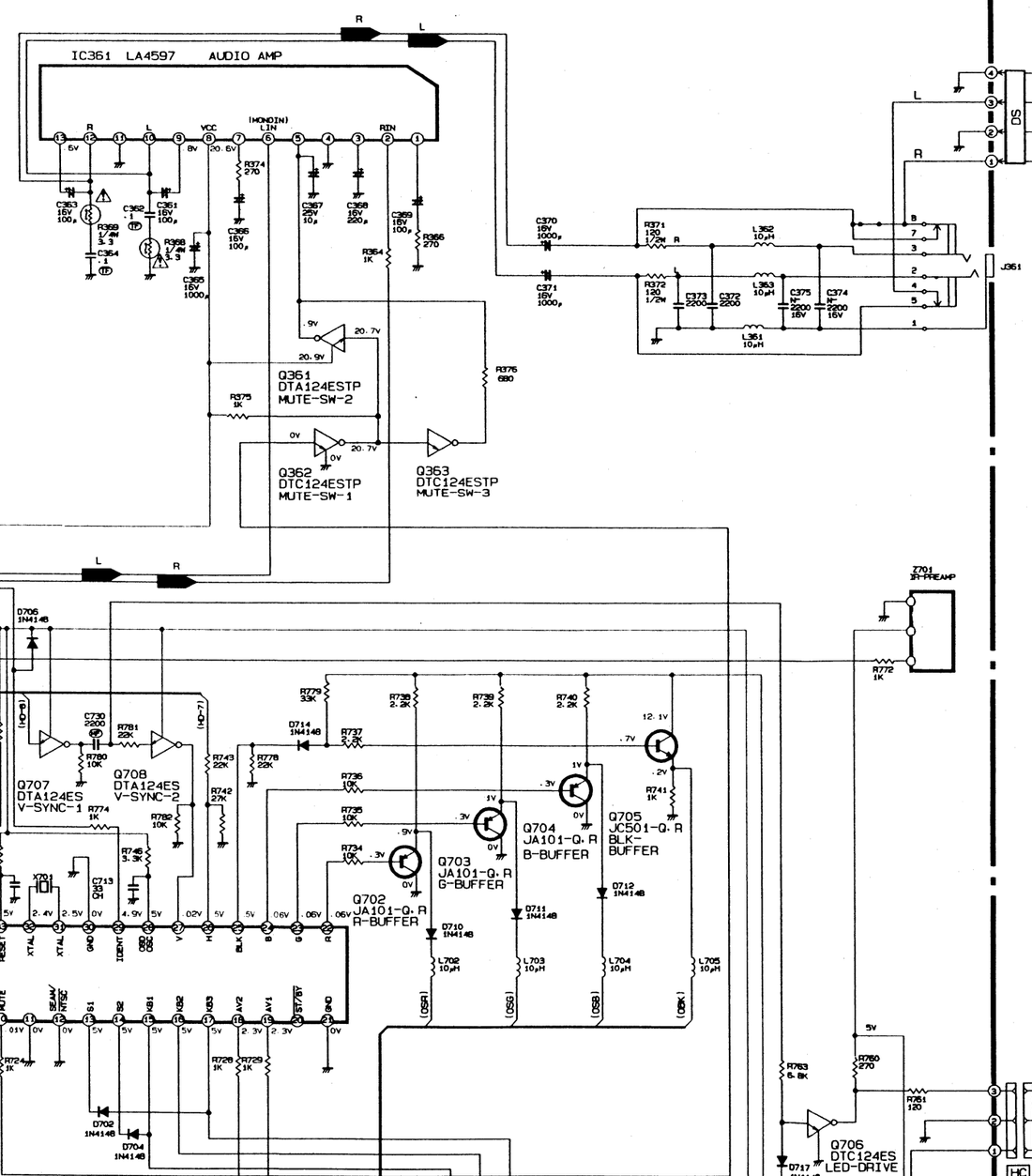
R.G.B



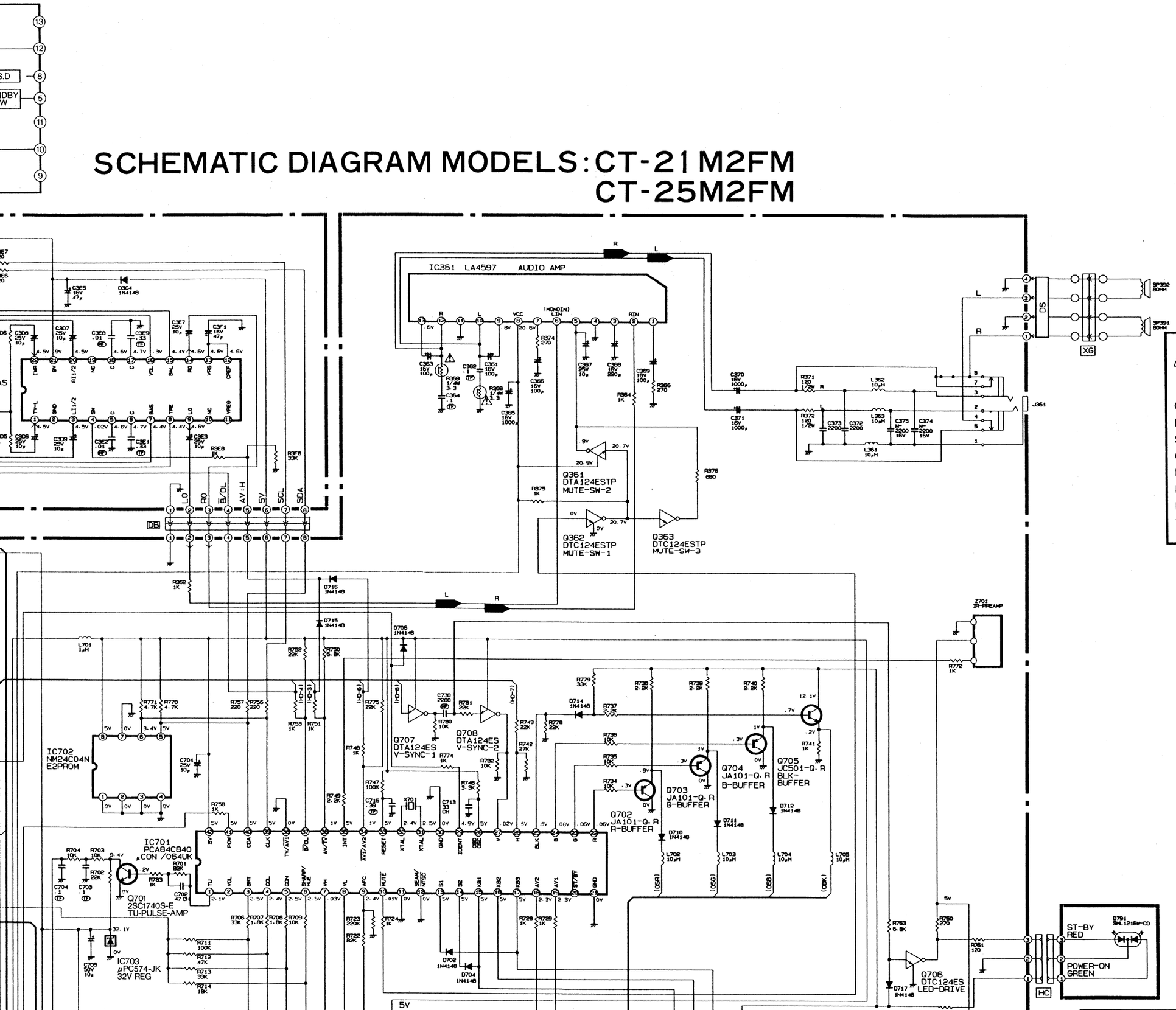


SCHEMATIC DIAGRAM MODELS: CT-21M2FM CT-25M2FM





SCHEMATIC DIAGRAM MODELS: CT-21M2FM CT-25M2FM



SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THERFORE REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS. FOR ACCURACY OF THE REPLACEMENT REFER TO THE PARTS LIST OF SERVICE MANUAL.

DON'T DEGRADE THE SAFETY OF THE RECEIVERS THROUGH IMPROPER SERVICING.

NOTE 1:

1. The unit of resistance is "ohm" with no symbol.
   Accordingly, K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, is less than 1/4 watt.
3. Resistors, if not specifically designated, are carbon resistors.
4. The marks of resistors are as follows:
   - (CE) : Cemented resistor
   - (MB) : Metal oxide film resistor (type B)
   - (MPC) : Metel plate cement resistor.
   - (ML) : Metal linear resistor.
   - (S) : Fixed composition resistor
   - (W) : Wire wound resistor
   - (M) : Metal film resistor
5. The tolerance of resistor value, if not specifically designated, is: ±5%, K = ±10% M = ±20%
6. The unit of capacitance, if not specifically designated, is;
   a) μF, for numbers less than 1
   b) PF, for numbers more than 1
7. Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors.
8. The marks of capacitors are as follows:
   - (ALM) : Aluminus electrolytic capacitor
   - (MF) : Polyester capacitor
   - (PP) : Polypropylene film capacitor
   - (TANT) : Tantalum capacitor
   - (TF) : Twin film capacitor.
   - (MF.PP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - (PS) : Styrol capacitor

IC701
PCA84CB40
μCON /064UK

Q701
2SC1740S-E
TU-PULSE-AMP

IC703
μPC574-JK
32V REG

Q702
JA101-Q, R
R-BUFFER

Q703
JA101-Q, R
G-BUFFER

Q706
DTC124ES
LED-DRIVE

⚠ PCB-LED

ST-BY
RED

POWER-ON
GREEN

⑮95Vp-p(H)

⑯100Vp-p(H)

⑰98Vp-p(H)

⚠ PCB-CRT

Q551
2SD1555
H-OUT

Q651
2SC3789-DE
R-OUT

Q652
2SC3789
-DE
B-OUT

Q653
2SC3789
-DE
G-OUT

Q654
JA101-Q, R
DRIVE-REF

SOCKET-CRT

V271 ⚠

5. All resistors are in ohms unless otherwise noted.
   K = 1000 M = 1000K
6. The unit of capacitance, if not specifically designated, is;
   a) μF, for numbers less than 1
   b) PF, for numbers more than 1
7. Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors.
8. The marks of capacitors are as follows:
   - (ALM) : Aluminus electrolytic capacitor
   - (MF) : Polyester capacitor
   - (PP) : Polypropylene film capacitor
   - (TANT) : Tantalum capacitor
   - (TF) : Twin film capacitor.
   - (MF.PP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - (PS) : Styrol capacitor.
   - (SC) : Semi conductor capacitor.
   - ⧧ : Electrolytic capacitor
9. The DC working voltage of capacitor, if not specifically designated is: 50V
10. The tolerance of capacitor value, if not specifically designated is:
    ±10% for polyester capacitor
    ±5% for ceramic capacitor
    and J = ±5% K = ±10% M = ±20% P = $^{+100\%}_{0\%}$
    C = ±0.25PF D = ±0.5PF F = ±1PF Z = $^{+80\%}_{-20\%}$ N = ±30%

SPECIFIC SYMBOL	
Zener Diode	Varistor
Varicap	Crystal unit
Posistor	Air Gap
Thermistor	Part (resistor) attached on the copper-foil side of PCB
Fusible Resistor	Ceramic filter

NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. Waveforms were taken with offset PAL colour bar signal.
3. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

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IC101 TDA8362 VIF/SIF/VCJ

IC702
NM24C04N
E2PROM

IC701
PCA84C840
μCON /064LK

Q701
2SC1740S-E
TU-PULSE-AMP

IC703
μPC574-JK
32V REG

IC451
AN5521
V-OUT

IC954
μPC78M08HF
8V REG

Q331
JC501-Q.R
AUDIO-
OUT-1

Q332
JC501-Q.R
AUDIO-OUT-AMP

Q105
DTA124ESTP
POS/NEG-SW

Q0301
JC501-Q.R
VIDEO-DET-2

Q102
DTA124ESTP
L-VL-SW

Q111
JC501
-Q.R
VIDEO
-DET-1

Q130
JC501-Q.R
VIDEO-DET-3

Q103
JC501-Q.R
BG/L-SW

Q2J7
JC501-Q.R
VIDEO-OUT-2

Q3J1
JC501-Q.R
AUDIO-OUT-2

Q2J2 Q2J3 Q2J4 Q2J1
Q2J1~Q2J6
DTC124ES
AV-SW-1~6

Q902
JC501-Q.R
BAND-SW

Q901
2SD1556
REG-OUT

IC901
TEA2261
REG-CONT

IC951
SI-3120C
12V REG

IC952
μPC78H05H
5V REG

Q551
2SD1555
H-OUT

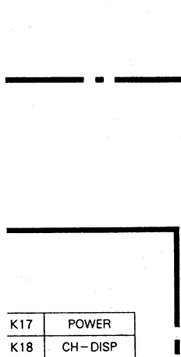
Q552
2SC2482
H-DRIVE

Q953
JC501-Q.R

Driver
Output
Pulse Amp.
Driver
Output
Pulse Amp.
SUB-CONT
V-LIN
V-HEIGHT
V-POST
(V-DRIVE)
(VFB)
(H-DRIVE)
(V-RAMP)
TU-PULSE-AMP
R,G,B
SOUND T.O.P
AGC
AGC OUT
IF
IF
AFT
DRIVE RAMP
VFB
φ1
φ2
FBP
H DRIVE
SUPPLY
XTAL
XTAL
BURST
4.43 OUT
B-Y OUT
R-Y OUT
R-Y IN
B-Y IN
SECAM /BLUE

K17	POWER
K18	CH−DISP
K19	CH3
K20	CH6
K21	CH9
K22	CH−BACK
K23	MENU
K24	→・←
K25	(Ⅰ/Ⅱ)
K26	(CM)
K27	(TEXT)
K28	(SIZE)
K29	(HOLD)
K30	(INDEX)
K31	(TIME/CANCEL)
K32	(REVEAL)

K17	POWER
K18	CH−DISP
K19	CH3
K20	CH6
K21	CH9
K22	CH−BACK
K23	MENU
K24	→・←
K25	(I／II)
K26	(CM)
K27	(TEXT)
K28	(SIZE)
K29	(HOLD)
K30	(INDEX)
K31	(TIME/CANCEL)
K32	(REVEAL)



PCB−AV

PCB−MAIN

PCB−POWER−SUB

IC Block Diagram
* Remote control unit
} See 990A319

DTC124ES

DTA124ES

*DIFFERENCE TABLE ○:APPLIED −:NOT APPLIED

PARTS / MODELS	C451	C456	C459	C462	C555	C556	C557	C558	C560	C568	LINK317	LINK346	R458	R461	R462	R463	R464	R466	R559	R563	R954	R955
CT-21M2FM	.068	.039	−	.056	3900	−	.47	−	1000μ	3300	○	○	39K	2.7	680	1.2K	−	330	○	220K	120K	10K
CT-25M2FM	.047	.1	○	.047	9100	○	.51	○	3300μ	2200	−	−	10K	.68	270	820	○	1K	−	180K	160K	8.2K

IC451
AN5521
V-OUT

IC954
μPC78M08HF
8V REG

IC951
SI-3120C
12V REG

IC952
μPC78H05H
5V REG

Q551
2SD1555
H-OUT

Q552
2SC2482
H-DRIVE

Q953
JC501-Q.R
ERROR-AMP

IC5E1
TEA2031A
E/W PCC-CONT

D5E1
JC501-Q.R
PPC-AMP

Q651
2SC3789-DE
R-OUT

Q652
2SC3789
-DE
B-OUT

Q653
2SC3789
-DE
G-OUT

Q654
JA101-Q.R
DRIVE-REF

PCB-CRT

PCB-MAIN

PCB-PCC-CONT

CT-25M2FM ONLY

SOCKET-CRT

See 990A319

C124ES

D1A124ES

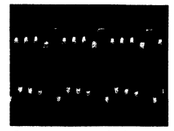
R462	R463	R464	R466	R559	R563	R954	R955	R958	R962	V271	VR451	VR951	Z551
0	1.2K	–	330	○	220K	120K	10K	8.2K	–	A51EBV13X01	–	B10K	–
0	820	○	1K	–	180K	160K	8.2K	12K	○	A59EAK71X11	○	B20K	○

CHASSIS WAVEFORMS

①2.4Vp-p(H)
②8.8Vp-p(V)
③2.0Vp-p(H)
④3.8Vp-p(H)
⑤3.6Vp-p(H)
⑥3.6Vp-p(H)
⑦0.7Vp-p(H)
⑧0.5Vp-p(H)
⑨1.3Vp-p(H)
⑩0.9Vp-p(H)
⑪5.5Vp-p(V)
⑫12Vp-p(V)
⑬0.7Vp-p(H)
⑭210Vp-p(H)
⑮100Vp-p(H)
⑰98Vp-p(H)

NOT
1. DC
gro
2. Wa
3. Th
mo

SPECIFIC SYMBOL	
Zener Diode	Varistor
Varicap	Crystal unit
Posistor	Air Gap
Thermistor	Part (resistor) attached on the copper-foil side of PCB
Fusible Resistor	Ceramic filter


⑯100Vp-p(H)

⑰98Vp-p(H)

NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. Waveforms were taken with offset PAL colour bar signal.
3. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

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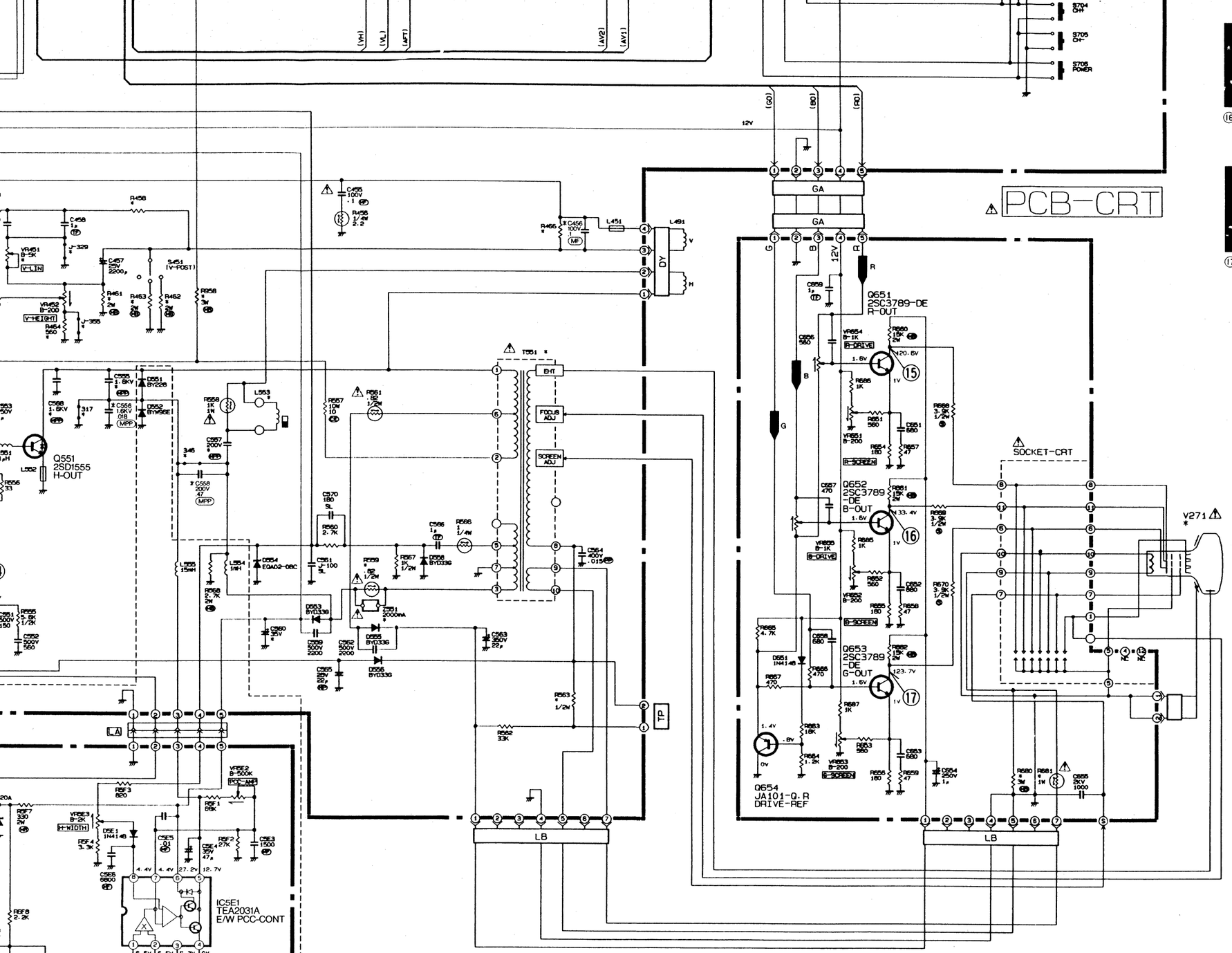
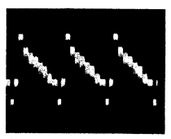
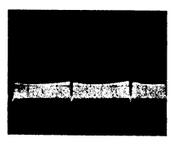
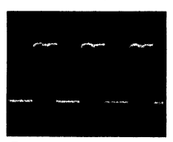


CHASSIS WAVEFORMS

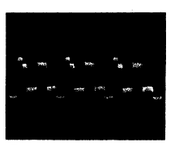

①2.4Vp-p(H)


②8.8Vp-p(V)

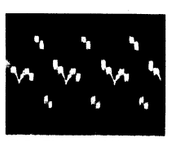

③2.0Vp-p(H)

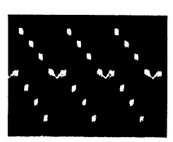
④3.8Vp-p(H)

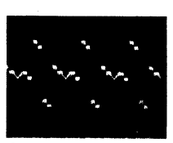
⑤3.6Vp-p(H)


⑥3.6Vp-p(H)

⑦0.7Vp-p(H)


⑧0.5Vp-p(H)


⑨1.3Vp-p(H)


⑩0.9Vp-p(H)

⑪5.5Vp-p(V)

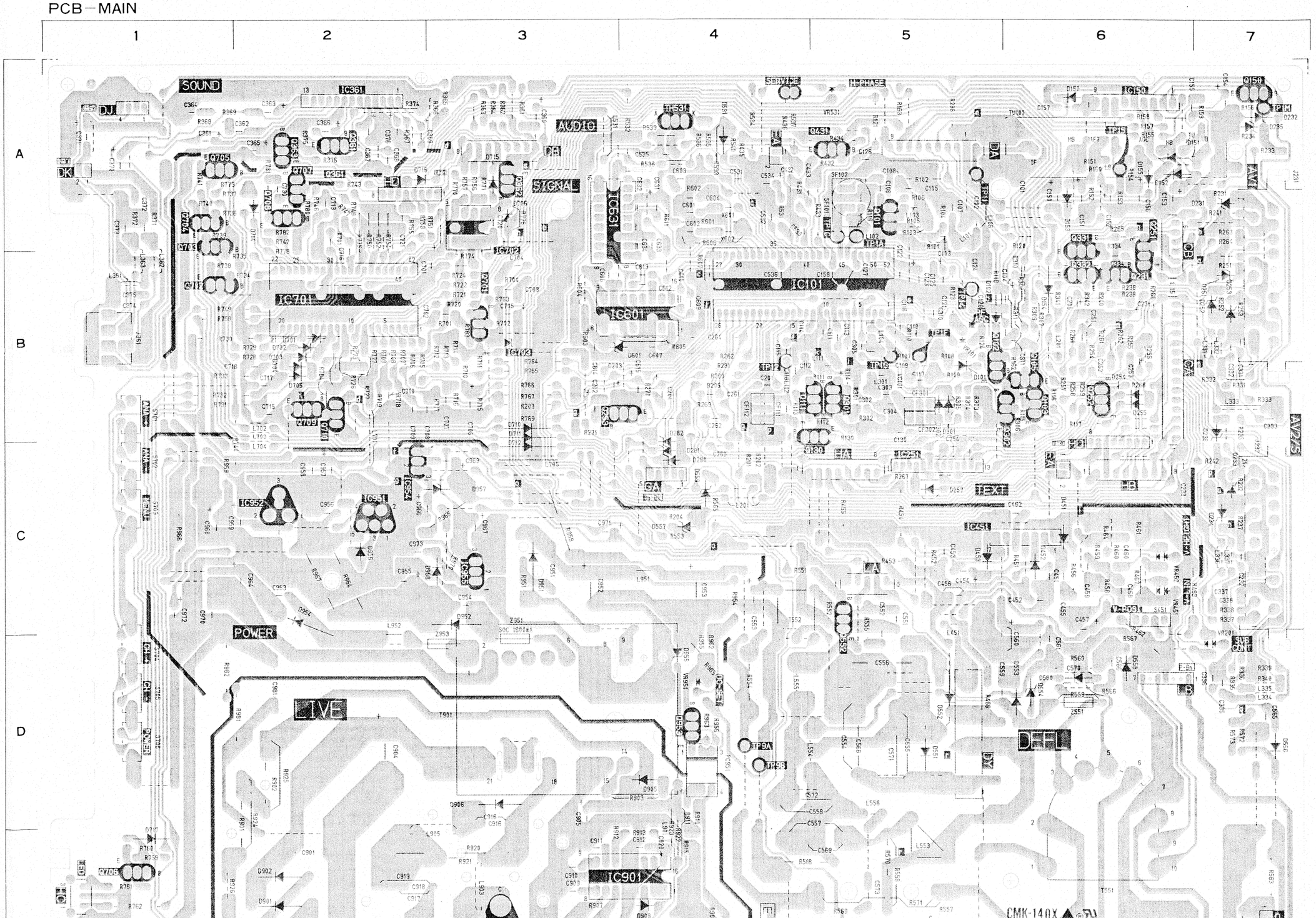
⑫12Vp-p(V)

⑬0.7Vp-p(H)

⑭210Vp-p(H)

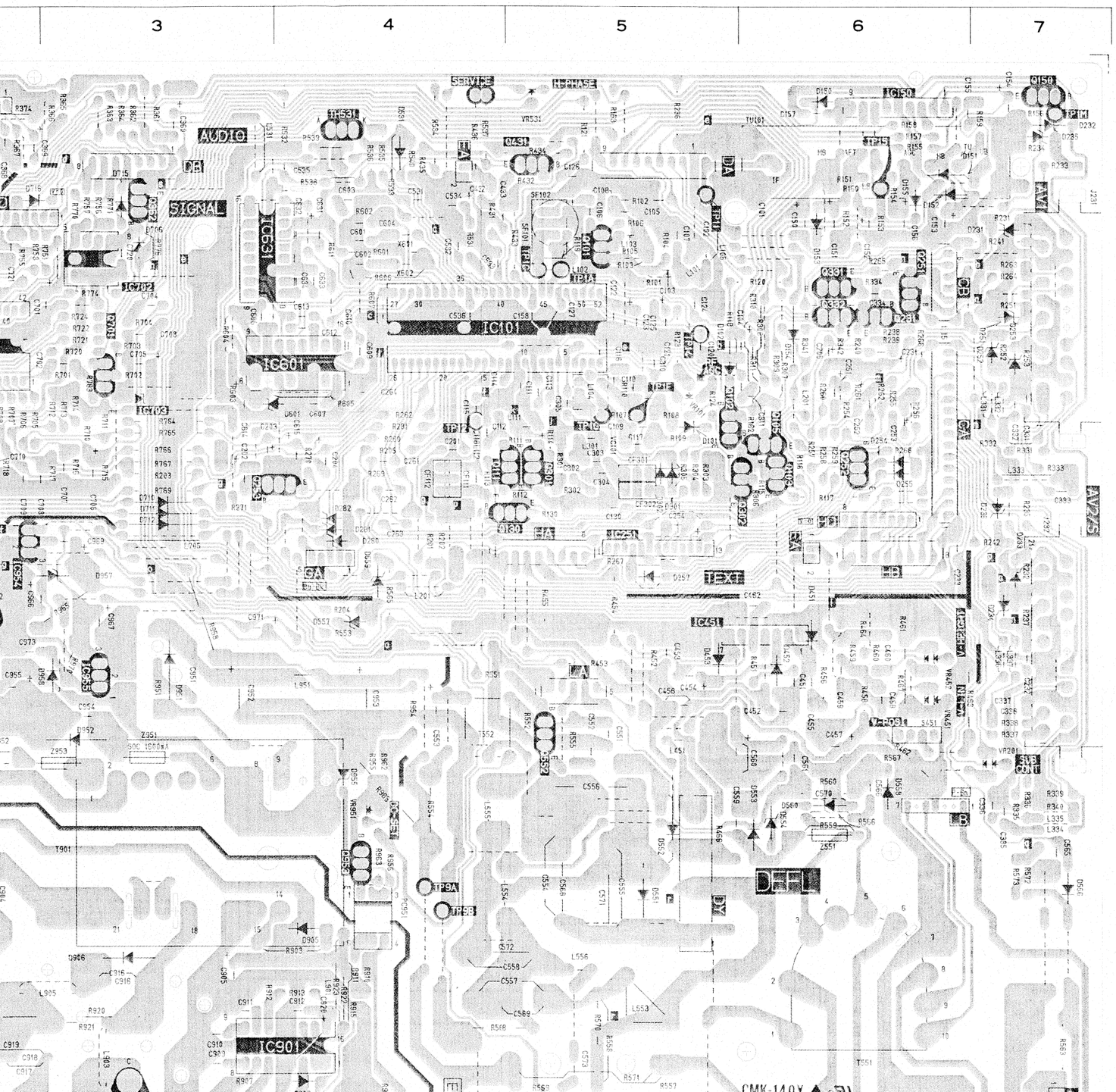
R958	R962	V271	VR451	VR951	Z551
8.2K	–	A51EBV13X01	–	B10K	–
12K	○	A59EAK71X11	○	B20K	○

PCB－MAIN



PCB-MAIN

SYMBOL NO.	ADDRESS
CF111	B－4
CF112	B－4
CF301	B－5
CF302	B－5
D101	B－5
D102	B－5
D150	A－6
D151	A－6
D152	A－6
D153	A－6
D154	B－6
D155	A－6
D231	A－8
D232	A－8
D232	C－7
D233	C－7
D235	A－8
D236	B－7
D251	B－7
D252	B－7
D253	B－7
D254	B－6
D255	B－6
D257	C－5
D280	C－4
D281	C－4
D282	B－4
D301	B－5
D302	B－5
D451	C－6
D452	C－6
D453	C－5
D531	A－4
D551	D－5
D552	D－5
D553	D－6
D554	D－6
D555	E－6
D556	D－7
D557	C－4
D558	D－6
D559	C－4
D560	D－6
D601	B－4
D701	B－2
D702	B－2
D703	B－2
D704	B－2
D705	B－2
D706	A－3
D710	B－3
D711	B－3
D712	C－3



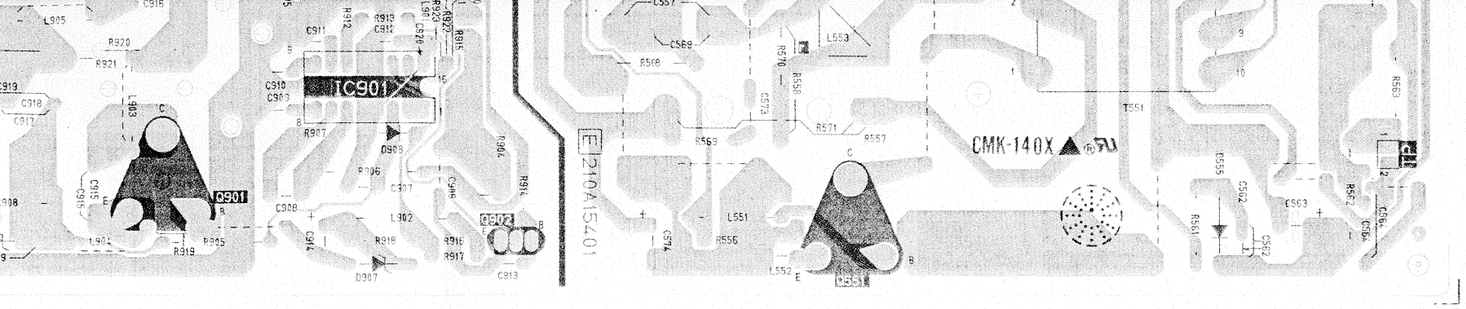
PCB-MAIN

SYMBOL NO.	ADDRESS
CF111	B – 4
CF112	B – 4
CF301	B – 5
CF302	B – 5
D101	B – 5
D102	B – 5
D150	A – 6
D151	A – 6
D152	A – 6
D153	A – 6
D154	B – 6
D155	A – 6
D231	A – 8
D232	A – 8
D232	C – 7
D233	C – 7
D235	A – 8
D236	B – 7
D251	B – 7
D252	B – 7
D253	B – 7
D254	B – 6
D255	B – 6
D257	C – 5
D280	C – 4
D281	C – 4
D282	B – 4
D301	B – 5
D302	B – 5
D451	C – 6
D452	C – 6
D453	C – 5
D531	A – 4
D551	D – 5
D552	D – 5
D553	D – 6
D554	D – 6
D555	E – 6
D556	D – 7
D557	C – 4
D558	D – 6
D559	C – 4
D560	D – 6
D601	B – 4
D701	B – 2
D702	B – 2
D703	B – 2
D704	B – 2
D705	B – 2
D706	A – 3
D710	B – 3
D711	B – 3
D712	C – 3

SYMBOL NO.	ADDRESS
D903	E – 2
D904	E – 2
D905	D – 4
D906	D – 3
D907	E – 4
D908	E – 4
D909	E – 2
D951	C – 3
D952	C – 3
D954	C – 2
D955	D – 4
D956	C – 2
D957	C – 3
D958	C – 2
D958	C – 3
IC101	B – 5
IC150	A – 6
IC251	C – 5
IC361	A – 2
IC451	C – 5
IC601	B – 4
IC631	A – 3
IC701	B – 2
IC702	A – 3
IC703	B – 3
IC901	E – 4
IC951	C – 2
IC952	C – 2
IC954	C – 2
IC955	C – 3
L101	A – 5
L102	A – 5
L103	A – 5
L104	B – 5
L105	A – 5
L111	B – 5
L112	B – 4
L201	B – 6
L201	C – 4
L301	B – 5
L331	B – 7
L332	B – 7
L333	B – 7
L334	D – 7
L335	D – 7
L336	C – 7
L337	C – 7
L361	B – 1
L362	B – 1
L363	B – 1
L451	C – 5
L531	A – 3

SYMBOL NO.	ADDRESS
L701	B – 2
L702	B – 2
L703	B – 2
L704	C – 2
L705	C – 3
L901	E – 4
L902	E – 4
L903	E – 3
L904	E – 3
L905	E – 3
L951	C – 4
L952	C – 2
PC951	D – 4
Q101	A – 5
Q102	B – 5
Q103	B – 6
Q105	B – 6
Q111	B – 4
Q130	C – 5
Q150	A – 7
Q231	B – 6
Q251	A – 6
Q252	B – 6
Q253	B – 3
Q301	B – 5
Q302	B – 6
Q331	A – 6
Q332	B – 6
Q361	A – 2
Q361	A – 2
Q362	A – 3
Q363	A – 2
Q431	A – 5
Q551	E – 5
Q552	D – 5
Q701	B – 3
Q702	B – 1
Q703	A – 1
Q704	A – 1
Q705	A – 1
Q706	E – 1
Q707	A – 2
Q708	A – 2
Q709	B – 2
Q710	B – 2
Q901	E – 3
Q902	E – 4
Q953	D – 4
S451	C – 6
S701	B – 1
S702	C – 1

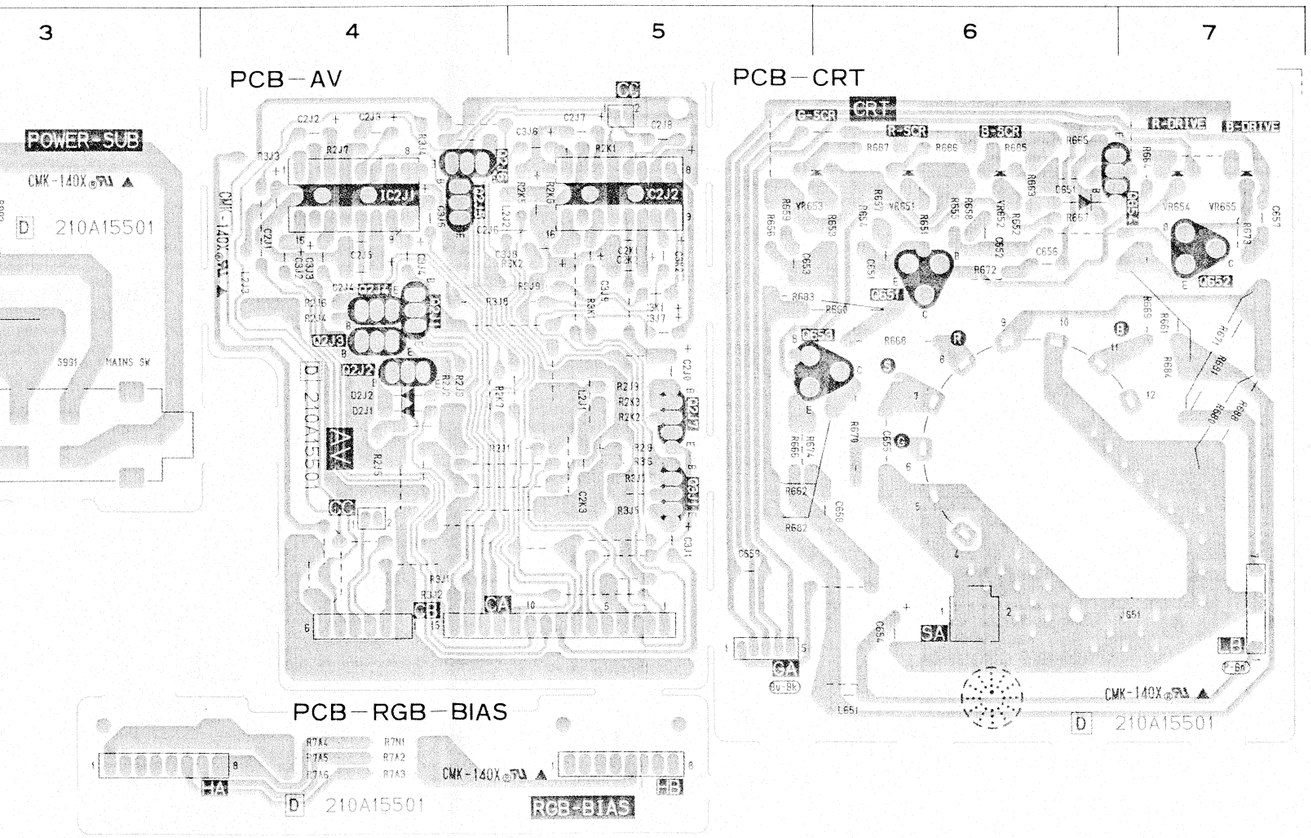
SYMBOL NO.	ADDRESS
SF102	A – 5
T551	E – 6
T552	C – 4
T901	D – 3
TH531	A – 4
TP11	A – 5
TP12	B – 4
TP14	B – 5
TP15	A – 6
TP1A	A – 5
TP1C	A – 5
TP1F	B – 5
TP1G	B – 5
TP1M	A – 8
TP9A	D – 4
TP9B	D – 4
TU101	A – 6
VC101	B – 5
VR101	B – 5
VR201	D – 7
VR451	C – 6
VR452	C – 6
VR531	A – 5
VR951	D – 4
X601	A – 4
X602	A – 4
X701	A – 2
Z551	D – 6
Z701	E – 1
Z951	C – 3
Z953	D – 3



D704	B – 2
D705	B – 2
D706	A – 3
D710	B – 3
D711	B – 3
D712	C – 3
D714	A – 2
D715	A – 3
D716	A – 2
D717	E – 1
D901	E – 2
D902	E – 2

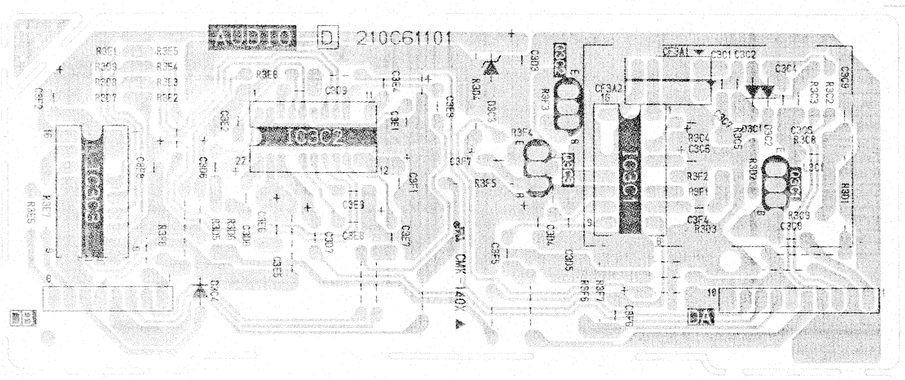
L337	C – 7
L361	B – 1
L362	B – 1
L363	B – 1
L451	C – 5
L531	A – 3
L551	E – 5
L552	E – 5
L553	E – 5
L554	D – 4
L555	D – 4
L556	D – 5

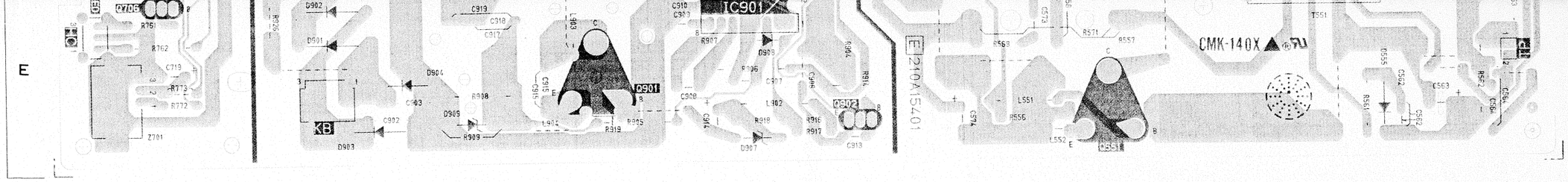
Q902	E – 4
Q953	D – 4
S451	C – 6
S701	B – 1
S702	C – 1
S703	C – 1
S704	D – 1
S705	D – 1
S706	D – 1
SF101	A – 5

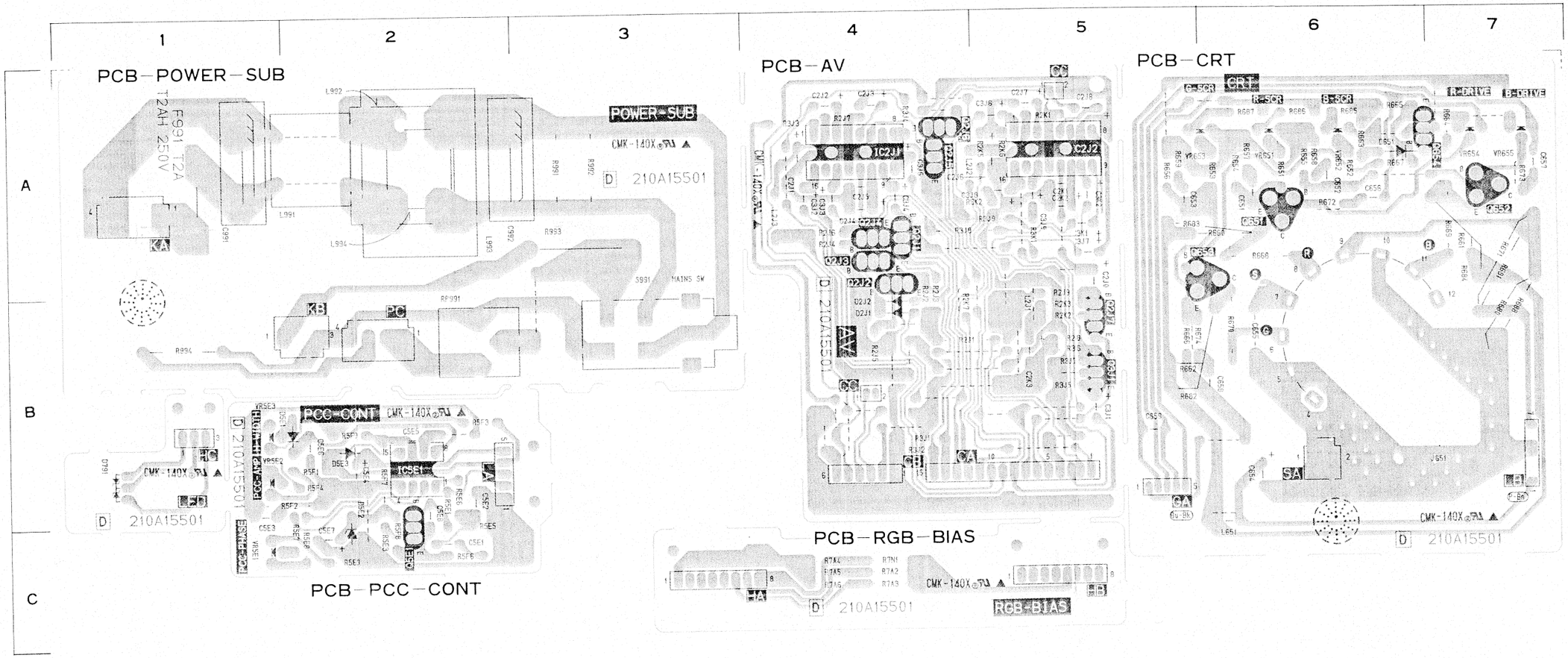


SYMBOL NO.	ADDRESS
D2J1	B – 4
D2J2	B – 4
D5E1	B – 1
D5E2	B – 2
D5E3	B – 2
D651	A – 6
D791	B – 1
F991	A – 1
IC2J1	A – 4
IC2J2	A – 5
L2J1	B – 5
L2J2	A – 4
L2J3	A – 4
L651	C – 6
L991	A – 2
L992	A – 2
L993	A – 2
L994	A – 2
Q2J1	A – 4
Q2J2	A – 4
Q2J3	A – 4
Q2J4	A – 4
Q2J5	A – 4
Q2J6	A – 4
Q2J7	B – 5
Q3J1	B – 5
Q5E1	C – 2
Q651	A – 6
Q652	A – 7
Q653	A – 6
Q654	A – 7
S991	A – 3
VR5E1	C – 1
VR5E2	B – 1
VR5E3	B – 1
VR651	A – 6
VR652	A – 6
VR653	A – 6
VR654	A – 7
VR655	A – 7

PCB-AUDIO







SYMBOL NO.	A
D2J1	
D2J2	
D5E1	
D5E2	
D5E3	
D651	
D791	
F991	
IC2J1	
IC2J2	
L2J1	
L2J2	
L2J3	
L651	
L991	
L992	
L993	
L994	
Q2J1	
Q2J2	
Q2J3	
Q2J4	
Q2J5	
Q2J6	
Q2J7	
Q3J1	
Q5E1	
Q651	
Q652	
Q653	
Q654	
S991	
VR5E1	
VR5E2	
VR5E3	
VR651	
VR652	
VR653	
VR654	
VR655	